

This document gives pertinent information concerning the reissuance of the VPDES Permit listed below. This permit is being processed as a Minor, Industrial permit. The discharge results from the backwash of a water treatment plant. This permit action consists of updating the proposed effluent limits to reflect the Virginia Water Quality Standard (WQS) (9VAC25-260-00 *et seq.*)(Effective: January 6, 2011) and updating permit language, as appropriate, to reflect current boilerplate. The effluent limitations and special conditions contained in this permit will maintain the Water Quality Standards of 9VAC25-260-00 *et seq.*

1. Facility Name and Mailing Address: Town of Warrenton Water Treatment Plant  
P. O. Drawer 341  
Warrenton, VA 20188  
  
SIC Code : 4941 WTP  
  
Facility Location: 7240 Blackwell Road  
Warrenton, VA 20186  
County: Fauquier  
  
Facility Contact Name: Edward Tucker, Director  
Email Address: etucker@warrentonva.gov  
Telephone Number: 540-347-6574
2. Permit No.: VA0058793  
Expiration Date of previous permit: 2/26/2011  
  
Other VPDES Permits associated with this facility: N/A  
  
Other Permits associated with this facility: N/A  
  
E2/E3/E4 Status: N/A
3. Owner Name: Town of Warrenton  
Owner Contact/Title: Edward Tucker, Director  
Telephone Number: 540-347-6574
4. Application Complete Date: 2/15/11  
Permit Drafted By: Joan Crowther  
Date Drafted: 5/10/11  
Draft Permit Reviewed By: Alison Thompson  
Date Reviewed: 5/16/11  
Draft Permit Reviewed By: Bryant Thomas  
Date Reviewed: 6/13/11  
1<sup>st</sup> Public Comment Period : Start Date: June 22, 2011  
End Date: July 22, 2011  
2<sup>nd</sup> Public Comment Period: Start Date: August 10, 2011  
End Date: September 9, 2011
5. Receiving Waters Information:  
Receiving Stream Name : Warrenton Reservoir, UT  
Drainage Area at Outfall: 0.02 sq.mi.  
River Mile: 1aXIY0.07  
Stream Basin: Potomac River  
Subbasin: Potomac River  
Section: 7e  
Stream Class: III  
Special Standards: PWS, g  
Waterbody ID: VAN-A17R  
7Q10 Low Flow: 0.0 MGD  
7Q10 High Flow: 0.0 MGD  
1Q10 Low Flow: 0.0 MGD  
1Q10 High Flow: 0.0 MGD  
Harmonic Mean Flow: 0.0 MGD  
30Q5 Flow: 0.0 MGD  
303(d) Listed: No  
30Q10 Flow: 0.0 MGD  
TMDL Approved: Yes  
Date TMDL Approved: EPA approval 7/6/04  
Pollutant of Concern: Bacteria

## 6. Statutory or Regulatory Basis for Special Conditions and Effluent Limitations:

- |   |  |
|---|--|
| <input checked="" type="checkbox"/> State Water Control Law | <input checked="" type="checkbox"/> EPA Guidelines                     |
| <input checked="" type="checkbox"/> Clean Water Act         | <input checked="" type="checkbox"/> Water Quality Standards            |
| <input checked="" type="checkbox"/> VPDES Permit Regulation | <input type="checkbox"/> Other ( <i>PES, Occoquan Policy, Dulles</i> ) |
| <input checked="" type="checkbox"/> EPA NPDES Regulation    |  |

## 7. Licensed Operator Requirements: N/A

## 8. Reliability Class: N/A

## 9. Permit Characterization:

- |  |   |   |
|--|---|---|
| <input type="checkbox"/> Private         | <input checked="" type="checkbox"/> Effluent Limited        | <input type="checkbox"/> Possible Interstate Effect       |
| <input type="checkbox"/> Federal         | <input checked="" type="checkbox"/> Water Quality Limited   | <input type="checkbox"/> Compliance Schedule Required     |
| <input type="checkbox"/> State           | <input type="checkbox"/> Toxics Monitoring Program Required | <input type="checkbox"/> Interim Limits in Permit         |
| <input checked="" type="checkbox"/> POTW | <input type="checkbox"/> Pretreatment Program Required      | <input type="checkbox"/> Interim Limits in Other Document |
| <input checked="" type="checkbox"/> TMDL |   |   |

10. **Wastewater Sources and Treatment Description:**

This water treatment facility is publicly owned by the Town of Warrenton and currently produces potable drinking water for the residents and businesses located in northern Fauquier County, Virginia.

The water treatment process consists of potassium permanganate chemical addition after the raw water pumping station followed by alum, lime and chlorine chemical addition at the flash mix tank. The process water then flows to two flocculation tanks, to two sedimentation tanks, and to two gravity filtration units. After filtration, the process water enters the distribution system for dispersal.

After settling, the wastewater from this water treatment process is normally returned to the head of the water treatment plant for use as raw water. When the manganese level in the storage tank makes this alternative unfeasible, the wastewater is pumped to the Town of Warrenton Wastewater Treatment Plant for disposal. This permit reissuance will allow the Town another treatment option by authorizing the wastewater to be discharged to the unnamed tributary to Warrenton Reservoir. The generated settled solids are pumped to the Town of Warrenton Wastewater Treatment Plant for processing.

See Attachment 1 for the NPDES Permit Rating Worksheet.

TABLE 1 – Outfall Description

Outfall Number	Discharge Sources	Treatment	Max 30-day Flow	Outfall Latitude and Longitude
001	Backwash Water from Filtration Units	Settling Basins	0.25 MGD	38° 44' 26" N 77° 47' 25" W

11. **Sludge Treatment and Disposal Methods:**

The settled sludge is pumped to Town of Warrenton Wastewater Treatment Plant (VA0021172) for treatment and disposal.

**12. Discharges, Intakes, Monitoring Stations, Other Items in Vicinity of Discharge**

There is a surface water intake for the Town of Warrenton located within a 5 mile radius from this facility. Within a 2 mile radius, there is no other individual VPDES Permit; however, there is one DEQ water quality monitoring station located at 1aCER032.15 that is located on Cedar Run at Route 672 bridge crossing, approximately 0.05 miles downstream of the Warrenton Reservoir.

USGS Topographic Map - Warrenton (DEQ #196A).

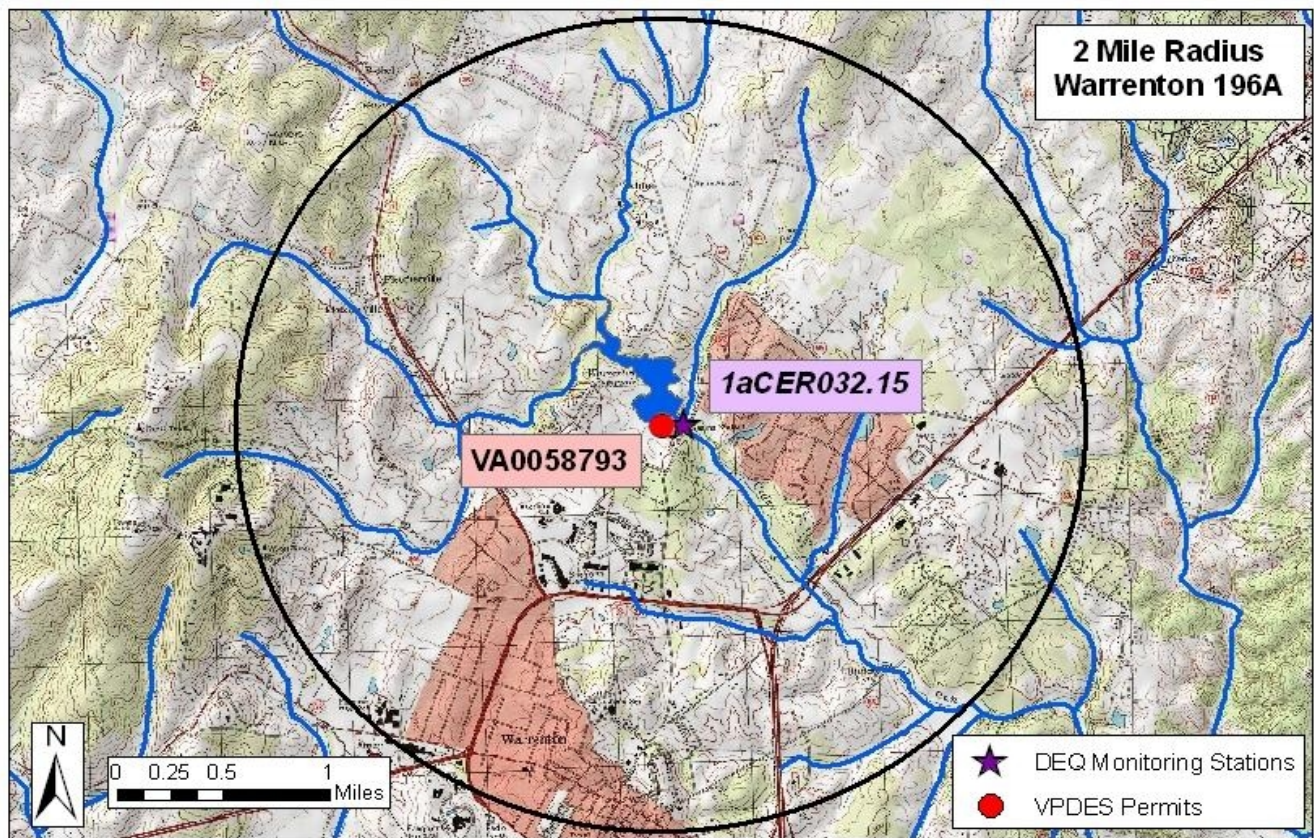
**13. Material Storage:** (Updated October 4, 2011)

TABLE 3 - Material Storage		
Materials Description	Volume Stored	Spill/Stormwater Prevention Measures
Chlorine	2,000 lbs. max 2,000 lbs. max	Stored inside within separate room Stored outside 50 yds. from building
Hydrofluosilicic Acid	200 gallons	Stored inside within separate room
Lime	500 lbs.	Stored inside within separate room
Soda Ash	16,200 lbs.	Stored inside
Sodium Hexaphosphate	1,000 lbs. (50 lbs. bags)	Stored inside
Potassium Permanganate	1,000 lbs.	Stored inside
Alum	6,000 gallons	Stored inside
Polymer	110 gallons	Stored inside

14. **Site Inspection:** Performed by Amy Taylor, DEQ-NRO permit writer on December 28, 2005. Because this facility does not normally discharge, it has not been routinely inspected by DEQ staff. (See Attachment 2).

15. **Receiving Stream Water Quality and Water Quality Standards:**

a) Ambient Water Quality Data

The nearest downstream DEQ ambient monitoring station is 1aCER032.15 located on Cedar Run at the Rt. 672 bridge crossing, approximately 0.05 miles downstream of the Warrenton Reservoir. The following is the summary for this portion of Cedar Run, as taken from the 2010 Integrated Report:

There are two ambient monitoring stations; namely, a DEQ ambient water quality monitoring station 1aCER032.15, at Route 672 and a Citizen monitoring station 1aCER-651-EASI. The 1a CER032.15 ambient monitoring station is located within Section 7a of the Potomac River Basin, and classified as a Class III water. This section has been designated with a special standard of g.

*E. coli* monitoring finds a bacterial impairment, resulting in an impaired classification for the recreation use. This impairment is nested within the downstream completed bacteria TMDL for the Cedar Run watershed. The aquatic life and wildlife uses are considered fully supporting. The fish consumption use was not assessed.

Please see Attachment 3 for complete Planning Statement dated March 16, 2011.

b) Receiving Stream Water Quality Criteria

Part IX of 9VAC25-260(360-550) designates classes and special standards applicable to defined Virginia river basins and sections. The receiving stream Warrenton Reservoir, UT is located within Section 7e of the Potomac River Basin, and classified as a Class III water.

At all times, Class III waters must achieve a dissolved oxygen (D.O.) of 4.0 mg/L or greater, a daily average D.O. of 5.0 mg/L or greater, a temperature that does not exceed 32°C, and maintain a pH of 6.0-9.0 standard units (S.U.).

Attachment 4, Freshwater Water Quality Criteria/Wasteload Allocated Analysis, details other water quality criteria applicable to the receiving stream.

Ammonia:

Since this VPDES permit authorizes the discharge of effluent resulting from the sludge sedimentation treatment from producing drinking water supply, ammonia would not be expected in the discharge; however, the additional effluent monitoring has indicated that Ammonia is present. Therefore, ammonia criteria were developed for the receiving stream.

The 7Q10 and 1Q10 of the receiving stream are 0.0 MGD. In cases such as this, effluent pH and temperature data may be used to establish the ammonia water quality standard. The effluent pH of 6.47 S.U. and temperatures of 3°C winter and 30°C for summer taken from the EPA 2C Form dated August 13, 2010 and re-certified September 28, 2010 were used to develop the ammonia criteria in Attachment 4.

Metals Criteria:

The Water Quality Criteria for some metals are dependent on the receiving stream's hardness (expressed as mg/L calcium carbonate). There is no hardness data for this facility and the 7Q10 and 1Q10 of the receiving stream are 0.0 MGD. Staff guidance suggests using a default hardness value of 50 mg/L CaCO<sub>3</sub> for streams east of the Blue Ridge. The hardness-dependent metals criteria in Attachment 4 are based on this default value.

Bacteria Criteria: The Virginia Water Quality Standards (9VAC25-260-170 A.) states that the following criteria shall apply to protect primary recreational uses in surface waters:

- 1) *E. coli* bacteria per 100 ml of water shall not exceed a monthly geometric mean of the following:

	Geometric Mean <sup>1</sup>
Freshwater <i>E. coli</i> (N/100 ml)	126

<sup>1</sup>For a minimum of four weekly samples [taken during any calendar month].

c) Receiving Stream Special Standards

The State Water Control Board's Water Quality Standards, River Basin Section Tables (9VAC25-260-360, 370 and 380) designates the river basins, sections, classes, and special standards for surface waters of the Commonwealth of Virginia. The receiving stream, Warrenton Reservoir, UT, is located within Section 7e of the Potomac Basin. This section has been designated with a special standard of PWS, g.

Special Standard PWS designates a public water supply intake. The Board's Water Quality Standards establish numerical standards for specific parameters calculated to protect human health from toxic effects through drinking water and fish consumption. See 9VAC25-260-140 B for applicable criteria.

Special Standard "g" refers to the Occoquan Watershed policy (9VAC25-410). The regulation sets stringent treatment and discharge requirements in order to improve and protect water quality, particularly since the waters are an important water supply for Northern Virginia. The regulation generally prohibits new STPs and only allows minor industrial discharges.

d) Threatened or Endangered Species

The Virginia DGIF Fish and Wildlife Information System Database was searched on March 31, 2001, for records to determine if there are threatened or endangered species in the vicinity of the discharge. No threatened or endangered species were identified. The database search results are found in Attachment 5.

**16. Antidegradation (9VAC25-260-30):**

All state surface waters are provided one of three levels of antidegradation protection. For Tier 1 or existing use protection, existing uses of the water body and the water quality to protect these uses must be maintained. Tier 2 water bodies have water quality that is better than the water quality standards. Significant lowering of the water quality of Tier 2 waters is not allowed without an evaluation of the economic and social impacts. Tier 3 water bodies are exceptional waters and are so designated by regulatory amendment. The antidegradation policy prohibits new or expanded discharges into exceptional waters.

The receiving stream at the point of discharge has been classified as Tier I based on the fact that the receiving stream is an ephemeral stream or dry ditch that has little to no flow (7Q10 = 0.0 MGD) except during or following periods of rainfall. Permit limits proposed have been established by determining wasteload allocations which will result in attaining and/or maintaining all water quality criteria which apply to the receiving stream, including narrative criteria. These wasteload allocations will provide for the protection and maintenance of all existing uses.

**17. Effluent Screening, Wasteload Allocation, and Effluent Limitation Development:**

To determine water quality-based effluent limitations for a discharge, the suitability of data must first be determined. Data is suitable for analysis if one or more representative data points are equal to or above the quantification level ("QL") and the data represent the exact pollutant being evaluated.

Next, the appropriate Water Quality Standards (WQS) are determined for the pollutants in the effluent. Then, the Wasteload Allocations (WLA) are calculated. In this case since the critical flows 7Q10 and 1Q10 have been determined to be zero, the WLA's are equal to the WQS. The WLA values are then compared with available effluent data to determine the need for effluent limitations. Effluent limitations are needed if the 97th percentile of the daily effluent concentration values is greater than the acute wasteload allocation or if the 97th percentile of the four-day average effluent concentration values is greater than the chronic wasteload allocation. Effluent limitations are based on the most limiting WLA, the required sampling frequency, and statistical characteristics of the effluent data.

a) Effluent Screening:

Effluent data obtained from permit application (EPA Form 2C dated August 13, 2010 and re-certified September 28, 2010) has been reviewed and determined to be suitable for evaluation. This facility has not discharged during the past permit term; therefore, there is no DMR data to review and there has been no exceedances of the established limitations.

The following pollutants require a wasteload allocation analysis: Total Residual Chlorine (TRC), Ammonia as N; 4, 4 DDT and Total Recoverable Manganese.

b) Mixing Zones and Wasteload Allocations (WLAs):

Wasteload allocations (WLAs) are calculated for those parameters in the effluent with the reasonable potential to cause an exceedance of water quality criteria. The basic calculation for establishing a WLA is the steady state complete mix equation:

$$WLA = \frac{C_o [Q_e + (f)(Q_s)] - [(C_s)(f)(Q_s)]}{Q_e}$$

Where:	WLA	=	Wasteload allocation
	C <sub>o</sub>	=	In-stream water quality criteria
	Q <sub>e</sub>	=	Design flow
	Q <sub>s</sub>	=	Critical receiving stream flow (1Q10 for acute aquatic life criteria; 7Q10 for chronic aquatic life criteria; 30Q10 for chronic ammonia criteria; harmonic mean for carcinogen-human health criteria; and 30Q5 for non-carcinogen human health criteria)
	f	=	Decimal fraction of critical flow
	C <sub>s</sub>	=	Mean background concentration of parameter in the receiving stream.

The water segment receiving the discharge via Outfall 001 is considered to have a 7Q10 and 1Q10 of 0.0 MGD. As such, there is no mixing zone and the WLA is equal to the C<sub>o</sub>.

Staff derived wasteload allocations where parameters are reasonably expected to be present in an effluent (e.g., total residual chlorine where chlorine is used as a means of disinfection) and where effluent data indicate the pollutant is present in the discharge above quantifiable levels. With regard to the Outfall 001 discharge, total residual chlorine may be present since chlorine is used for disinfection, and the Permit Application EPA Form 2C, Attachment A data indicate that Ammonia as Nitrogen, Manganese and 4, 4, DDT are present in the discharge. As such, Attachment 4 details the WLA derivations for these pollutants.

c) Effluent Limitations Toxic Pollutants, Outfall 001:

9VAC25-31-220.D. requires limits be imposed where a discharge has a reasonable potential to cause or contribute to an in-stream excursion of water quality criteria. Those parameters with WLAs that are near effluent concentrations are evaluated for limits.



The VPDES Permit Regulation at 9VAC25-31-230.D. requires that monthly and weekly average limitations be imposed for continuous discharges from POTWs and monthly average and daily maximum limitations be imposed for all other continuous non-POTW discharges.

1) Ammonia as N:

Staff used the pH (6.47 S.U.) and temperatures (3°C winter; 30°C summer) from the EPA 2C Form to derive ammonia criteria. Ammonia as N criteria was only determined because effluent sampling revealed that Ammonia as N was in the effluent. This facility produces potable water. Because the permit is for the discharge of its wastewater and there is no domestic sewage is being treated, the actual Ammonia as N data of 0.8 mg/L was used to determine whether or not an effluent limitation would be required. Attachment 6 indicates that no Ammonia as N effluent limitation needed.

2) Total Residual Chlorine:

Because the discharge is intermittent, chronic criteria is protected and only the acute criteria needs to be considered for effluent limitations, therefore the WLA and limitations are set equal to the water quality criteria. A monthly average limit of 0.019 mg/L and a daily maximum average limit of 0.019 mg/L was previously established and will be carried forward as part of this reissuance process (see Attachment 7).

3) Metals/Organics/Pesticides:

4, 4, DDT was detected in the wastewater; however, the data was below the QL so no limits are required. See Attachment 8 for WLA and the documentation supporting that no limit is necessary.

Manganese of 5.13 mg/L was reported on the EPA 2C Form. Manganese has a Human health Public Water Supply water quality criterion of 50 ug/L. Based on the analysis, an effluent limitation of 50 ug/L is required. See Attachment 9 for the documentation supporting this effluent limitation.

During the first public comment period (June 22<sup>nd</sup> through July 22<sup>nd</sup> 2011), the Town of Warrenton commented that the proposed Total Recoverable Manganese effluent limitation could not be obtainable by the wastewater treatment plant. After reviewing their files, the Town has determined that the 5.13 mg/L reported on the EPA 2C Form represented the highest level of manganese from the Warrenton Reservoir and not from the wastewater treatment plant's discharge. In order to determine what the total recoverable manganese would be from the wastewater treatment plant, they collected samples in July for 11 days. The average resulting from this sampling event was 0.46 mg/L.

After consultation with our Central Office, we have determined that since the Total Recoverable Manganese human health criteria is a taste and odor issue, not an aquatic water quality issue, and that DEQ's Central Office will be investigating the actual need for a Total Recoverable Manganese human health criteria with EPA in the next couple of years, that it would be best to remove the stringent Total Recoverable Manganese effluent limitation and require only effluent monitoring. Once the need for a human health criteria is determined to be valid or not, then it can be determined if an effluent Total Recoverable Manganese limitation is appropriate or not for this facility's discharge.

d) Effluent Limitations and Monitoring, Outfall 001 – Conventional and Non-Conventional Pollutants

There are no changes to total suspended solids (TSS), Total Residual Chlorine and pH limitations proposed.

Total Suspended Solids are based on Best Professional Judgment.

pH limitations are set at the water quality criteria.

e) Effluent Limitations and Monitoring Summary.

The effluent limitations are presented in the following table. Limits were established for pH, Total Suspended Solids, and Total Residual Chlorine.

The limit for Total Suspended Solids is based on Best Professional Judgement.

Sample Type and Frequency are in accordance with the recommendations in the VPDES Permit Manual.

**18. Antibacksliding:**

All limits in this permit are at least as stringent as those previously established. Backsliding does not apply to this reissuance.

**19. Effluent Limitations/Monitoring Requirements:**

Average flow of this industrial facility is 0.25 MGD.

Effective Dates: During the period beginning with the permit's effective date and lasting until the expiration date.

PARAMETER	BASIS FOR LIMITS	DISCHARGE LIMITATIONS			MONITORING REQUIREMENTS	
		<u>Monthly Average</u>	<u>Minimum</u>	<u>Maximum</u>	<u>Frequency</u>	<u>Sample Type</u>
Flow (MGD)	NA	NL	NA	NL	1/M	Estimate
pH	3	NA	6.0 S.U.	9.0 S.U.	1/M	Grab
Total Suspended Solids (TSS)	2	30 mg/L	NA	60 mg/L	1/M	5G/8H
Total Residual Chlorine	4	0.019 mg/L	NA	0.019 mg/L	1/M	Grab
Total Recoverable Manganese	3	NL	NA	NL	1/M	Grab

The basis for the limitations codes are:

- |                                  |                                    |                         |
|----------------------------------|------------------------------------|-------------------------|
| 1. Federal Effluent Requirements | MGD = Million gallons per day.     | 1/M = Once every month. |
| 2. Best Professional Judgement   | NA = Not applicable.               |                         |
| 3. Water Quality Standards       | NL = No limit; monitor and report. |                         |
| 4. DEQ Disinfection Guidance     | S.U. = Standard units.             |                         |

5G/8H = Eight Hour Composite – consisting of five (5) grab samples collected at hourly intervals until the discharge ceases or five (5) grab samples at equal time intervals for the duration of the discharge if less than eight (8) hours in length.

Grab = An individual sample collected over a period of time not to exceed 15-minutes.

**20. Other Permit Requirements:**a) Part I.B. of the permit contains quantification levels and compliance reporting instructions.

9VAC25-31-190.L.4.c. requires an arithmetic mean for measurement averaging and 9VAC25-31-220.D. requires limits be imposed where a discharge has a reasonable potential to cause or contribute to an in-stream excursion of water quality criteria. Specific analytical methodologies for toxics are listed in this permit section as well as quantification levels (QLs) necessary to demonstrate compliance with applicable permit limitations or for use in future evaluations to determine if the pollutant has reasonable potential to cause or contribute to a violation. Required averaging methodologies are also specified.

b) Permit Section Part I.C., details the requirements for Toxics Management Program.

The VPDES Permit Regulation at 9VAC25-31-210 requires monitoring and 9VAC25-31-220.I, requires limitations in the permit to provide for and assure compliance with all applicable requirements of the State Water Control Law and the Clean Water Act. A TMP is imposed for municipal facilities with a design rate >1.0 MGD, with an approved pretreatment program or required to develop a pretreatment program or those determined by the Board based on effluent variability, IWC or the potential to cause toxicity.



The Warrenton WTP is an industrial facility with the potential to cause toxicity in the receiving stream should it discharge. It is unlikely that the facility will discharge; however, should the facility begin discharging, it will be necessary to test for toxicity. A special condition requiring acute toxicity testing is included in the permit to occur with the third discharge event. The reason for the third event is to allow one or two events due to abnormal (emergency) occurrences. Because the discharge will be rare and not continuous, only acute testing is necessary. As the discharge is to a drainage ditch (unnamed tributary) leading to Warrenton Reservoir, no dilution is available and a NOAEC test is required. The special condition specifies the terms of the sampling and testing requirements. This reflects current agency Guidance Memo 00-2012.

## 21. Other Special Conditions:

### a) O&M Manual Requirement.

Required by Code of Virginia §62.1-44.19; Sewage Collection and Treatment Regulations, 9VAC25-790; VPDES Permit Regulation, 9VAC25-31-190.E. Within 90 days of the effective date of this permit, the permittee shall submit for approval an Operation and Maintenance (O&M) Manual or a statement confirming the accuracy and completeness of the current O&M Manual to the Department of Environmental Quality, Northern Regional Office (DEQ-NRO). Future changes to the facility must be addressed by the submittal of a revised O&M Manual within 90 days of the changes. Non-compliance with the O&M Manual shall be deemed a violation of the permit.

### b) Notification Levels.

The permittee shall notify the Department as soon as they know or have reason to believe:

a. That any activity has occurred or will occur which would result in the discharge, on a routine or frequent basis, of any toxic pollutant which is not limited in this permit, if that discharge will exceed the highest of the following notification levels:

- (1) One hundred micrograms per liter;
- (2) Two hundred micrograms per liter for acrolein and acrylonitrile; five hundred micrograms per liter for 2,4-dinitrophenol and for 2-methyl-4,6-dinitrophenol; and one milligram per liter for antimony;
- (3) Five times the maximum concentration value reported for that pollutant in the permit application; or
- (4) The level established by the Board.

b. That any activity has occurred or will occur which would result in any discharge, on a nonroutine or infrequent basis, of a toxic pollutant which is not limited in this permit, if that discharge will exceed the highest of the following notification levels:

- (1) Five hundred micrograms per liter;
- (2) One milligram per liter for antimony;
- (3) Ten times the maximum concentration value reported for that pollutant in the permit application; or
- (4) The level established by the Board.

### c) Materials Handling/Storage.

9VAC25-31-50 A prohibits the discharge of any wastes into State waters unless authorized by permit. Code of Virginia §62.1-44.16 and §62.1-44.17 authorize the Board to regulate the discharge of industrial waste or other waste.

Permit Section Part II. Part II of the permit contains standard conditions that appear in all VPDES Permits. In general, these standard conditions address the responsibilities of the permittee, reporting requirements, testing procedures and records retention.

**23. Changes to the Permit from the Previously Issued Permit:**

- a) Special Conditions:
  - 1) Removed the Special Condition for the Water Quality Criteria Monitoring- Attachment A – This is a requirement of the Permit Application EPA Form 2C and does not need to be repeated in the VPDES Permit.
  - 2) Removed the Special Condition for the Water Quality Criteria Reopener. This special condition is no longer necessary because if the Water Quality Criteria Monitoring should indicate that additional monitoring is necessary, it will be included at the time of reissuance when the data is submitted and reviewed.
- b) Monitoring and Effluent Limitations:
  - 1) The design flow has been increased from 0.237 MGD to 0.25 MGD as stated in the Permit Application Package dated September 28, 2010.
  - 2) An effluent limitation for Total Recoverable Manganese was added to the permit.

**24. Variances/Alternate Limits or Conditions:**

There are no variances or alternate limits or conditions in this permit reissuance.

**25. Public Notice Information:**

1<sup>st</sup> First Public Notice Date: June 22, 2011

1<sup>st</sup> Second Public Notice Date: June 29, 2011

2<sup>nd</sup> First Public Notice Date: August 10, 2011

2<sup>nd</sup> Second Public Notice Date: August 17, 2011

Public Notice Information is required by 9VAC25-31-280 B. All pertinent information is on file and may be inspected, and copied by contacting the: DEQ Northern Regional Office, 13901 Crown Court, Woodbridge, VA 22193, Telephone No. (703) 583-3925, joan.crowther@deq.virginia.gov. See Attachment 10 for a copy of the public notice document.

Persons may comment in writing or by email to the DEQ on the proposed permit action, and may request a public hearing, during the comment period. Comments shall include the name, address, and telephone number of the writer and of all persons represented by the commenter/requester, and shall contain a complete, concise statement of the factual basis for comments. Only those comments received within this period will be considered. The DEQ may decide to hold a public hearing, including another comment period, if public response is significant and there are substantial, disputed issues relevant to the permit. Requests for public hearings shall state 1) the reason why a hearing is requested; 2) a brief, informal statement regarding the nature and extent of the interest of the requester or of those represented by the requester, including how and to what extent such interest would be directly and adversely affected by the permit; and 3) specific references, where possible, to terms and conditions of the permit with suggested revisions. Following the comment period, the Board will make a determination regarding the proposed permit action. This determination will become effective, unless the DEQ grants a public hearing. Due notice of any public hearing will be given. The public may request an electronic copy of the draft permit and fact sheet or review the draft permit and application at the DEQ Northern Regional Office by appointment.

**26. 303 (d) Listed Stream Segments and Total Max. Daily Loads (TMDL):**

This facility discharges directly to Warrenton Reservoir, UT. The stream segment receiving the effluent is not listed in Part I of the approved 2010 303(d) list. However, downstream of the Warrenton Reservoir, Cedar Run is listed as impaired. Cedar Run is listed as not meeting the recreation use goal. Sufficient excursions from the maximum *E. coli* bacteria criterion (2 of 12 samples - 16.7%) were recorded at DEQ's ambient water quality monitoring station (1aCER032.15) at the Route 672 crossing to assess this stream segment as not supporting the recreation use goal for the 2010 water quality assessment. EPA approved the Cedar Run Bacteria TMDL on July 6, 2007 for this segment. It does not contain a WLA for this discharge. No limit for *E. coli* bacteria is included because the effluent does not contain *E. coli* bacteria.

**Special Permit considerations:**

None

**27. Additional Comments:**

Previous Board Action(s): None

Staff Comments: The delay in the reissuance of this permit was due to a heavy staff workload.

**1<sup>st</sup> Public Comment Period:**

1) During the first public comment period (June 22, 2011 through July 22, 2011), the Town of Warrenton expressed a concern regarding the proposed Total Recoverable Manganese effluent limitation. This effluent limitation was based on one data point that was reported on the EPA 2C Form. After reviewing their files, the Town has determined that the 5.13 mg/L reported on the EPA 2C Form represented the highest level of manganese from the Warrenton Reservoir and not from the wastewater treatment plant's discharge. In order to determine what the total recoverable manganese would be from the wastewater treatment plant, they collected samples in July for 11 days. The average resulting from this sampling event was 0.46 mg/L.

After consultation with our Central Office, we have determined that since the Total Recoverable Manganese human health criteria is a taste and odor issue, not an aquatic water quality issue, and that DEQ's Central Office will be investigating the actual need for a Total Recoverable Manganese human health criteria with EPA in the next couple of years, that it would be best to remove the stringent Total Recoverable Manganese effluent limitation and require only effluent monitoring. Once the need for a human health criteria is determined to be valid or not, then it can be determined if an effluent Total Recoverable Manganese limitation is appropriate or not for this facility's discharge.

Because the need for a Total Recoverable Manganese effluent limitation is being removed with only a monitoring requirement remaining, the draft permit will have to re-public notice.

**2<sup>nd</sup> Public Comment Period:**

No comments were received.

EPA Checklist: The checklist can be found in Attachment 11.

Town of Warrenton Water Treatment Plant  
Fact Sheet Attachments

Attachment	Description
1	NPDES Permit Worksheet
2	Site Inspection Report dated December 28, 2005 by Amy Taylor, DEQ-NRO Permit Writer
3	Planning Statement for Town of Warrenton WTP, dated March 16, 2011
4	Freshwater Water Quality Criteria/Wasteload Allocated Analysis dated June 1, 2011
5	DGIF Threatened and Endangered Species Database Search dated March 31, 2011
6	Ammonia Effluent Calculation Results
7	TRC Effluent Calculation Results
8	4, 4 DDT Effluent Calculation Results
9	Total Recoverable Manganese Effluent Calculation Results
10	1 <sup>st</sup> Public Notice; 2 <sup>nd</sup> Public Notice
11	EPA Checklist dated May 10, 2011

## NPDES PERMIT RATING WORK SHEET

VPDES NO. : VA0058793

- ☐ Regular Addition  
☐ Discretionary Addition  
☐ Score change, but no status Change  
☐ Deletion

Facility Name: Town of Warrenton Water Treatment Plant

City / County: Fauquier County

Receiving Water: Warrenton Reservoir, UT

Waterbody ID: VAN-A17R

Is this facility a steam electric power plant (sic =4911) with one or more of the following characteristics?

1. Power output 500 MW or greater (not using a cooling pond/lake)

2. A nuclear power Plant

3. Cooling water discharge greater than 25% of the receiving stream's 7Q10 flow rater

Is this permit for a municipal separate storm sewer serving a population greater than 100,000?

☐ YES; score is 700 (stop here)☒ NO; (continue)☐ Yes; score is 600 (stop here) ☒ NO; (continue)

## FACTOR 1: Toxic Pollutant Potential

PCS SIC Code: Primary Sic Code: 4941 Other Sic Codes:

Industrial Subcategory Code: 000 (Code 000 if no subcategory)

Determine the Toxicity potential from Appendix A. Be sure to use the TOTAL toxicity potential column and check one)

Toxicity Group	Code	Points	Toxicity Group	Code	Points	Toxicity Group	Code	Points
<input type="checkbox"/> No process waste streams	0	0	<input type="checkbox"/> 3.	3	15	<input checked="" type="checkbox"/> 7.	7	35
<input type="checkbox"/> 1.	1	5	<input type="checkbox"/> 4.	4	20	<input type="checkbox"/> 8.	8	40
<input type="checkbox"/> 2.	2	10	<input type="checkbox"/> 5.	5	25	<input type="checkbox"/> 9.	9	45
			<input type="checkbox"/> 6.	6	30	<input type="checkbox"/> 10.	10	50

Code Number Checked: 7

Total Points Factor 1: 35

## FACTOR 2: Flow/Stream Flow Volume (Complete either Section A or Section B; check only one)

## Section A – Wastewater Flow Only considered

Wastewater Type (see Instructions)	Code	Points
Type I: Flow < 5 MGD	<input type="checkbox"/> 11	0
Flow 5 to 10 MGD	<input type="checkbox"/> 12	10
Flow > 10 to 50 MGD	<input type="checkbox"/> 13	20
Flow > 50 MGD	<input type="checkbox"/> 14	30
Type II: Flow < 1 MGD	<input checked="" type="checkbox"/> 21	10
Flow 1 to 5 MGD	<input type="checkbox"/> 22	20
Flow > 5 to 10 MGD	<input type="checkbox"/> 23	30
Flow > 10 MGD	<input type="checkbox"/> 24	50
Type III: Flow < 1 MGD	<input type="checkbox"/> 31	0
Flow 1 to 5 MGD	<input type="checkbox"/> 32	10
Flow > 5 to 10 MGD	<input type="checkbox"/> 33	20
Flow > 10 MGD	<input type="checkbox"/> 34	30

## Section B – Wastewater and Stream Flow Considered

Wastewater Type (see Instructions)	Percent of Instream Wastewater Concentration at Receiving Stream Low Flow	Code	Points
Type I/III:	< 10 %	<input type="checkbox"/> 41	0
	10 % to < 50 %	<input type="checkbox"/> 42	10
	> 50 %	<input type="checkbox"/> 43	20
Type II:	< 10 %	<input type="checkbox"/> 51	0
	10 % to < 50 %	<input type="checkbox"/> 52	20
	> 50 %	<input type="checkbox"/> 53	30

Code Checked from Section A or B: 21

Total Points Factor 2: 10

## NPDES PERMIT RATING WORK SHEET

**FACTOR 3: Conventional Pollutants**

(only when limited by the permit)

A. Oxygen Demanding Pollutants: (check one) ☐ BOD ☐ COD ☐ Other: \_\_\_\_\_

Permit Limits: (check one)

- ☐ < 100 lbs/day  
☐ 100 to 1000 lbs/day  
☐ > 1000 to 3000 lbs/day  
☐ > 3000 lbs/day

Code	Points
1	0
2	5
3	15
4	20

Code Number Checked: N/A

Points Scored: \_\_\_\_\_

B. Total Suspended Solids (TSS)

Permit Limits: (check one)

- ☒ < 100 lbs/day  
☐ 100 to 1000 lbs/day  
☐ > 1000 to 5000 lbs/day  
☐ > 5000 lbs/day

Code	Points
1	0
2	5
3	15
4	20

Code Number Checked: 1Points Scored: 0C. Nitrogen Pollutants: (check one) ☐ Ammonia ☐ Other: \_\_\_\_\_

Permit Limits: (check one)

- ☐ < 300 lbs/day  
☐ 300 to 1000 lbs/day  
☐ > 1000 to 3000 lbs/day  
☐ > 3000 lbs/day

Code	Points
1	0
2	5
3	15
4	20

Code Number Checked: N/A

Points Scored: \_\_\_\_\_

Total Points Factor 3: 0**FACTOR 4: Public Health Impact**

Is there a public drinking water supply located within 50 miles downstream of the effluent discharge (this include any body of water to which the receiving water is a tributary)? A public drinking water supply may include infiltration galleries, or other methods of conveyance that ultimately get water from the above reference supply.

☒ YES; (If yes, check toxicity potential number below)☐ NO; (If no, go to Factor 5)

Determine the *Human Health* potential from Appendix A. Use the same SIC doe and subcategory reference as in Factor 1. (Be sure to use the *Human Health* toxicity group column – check one below)

Toxicity Group	Code	Points	Toxicity Group	Code	Points	Toxicity Group	Code	Points
<input type="checkbox"/> No process waste streams	0	0	<input type="checkbox"/> 3.	3	0	<input checked="" type="checkbox"/> 7.	7	15
<input type="checkbox"/> 1.	1	0	<input type="checkbox"/> 4.	4	0	<input type="checkbox"/> 8.	8	20
<input type="checkbox"/> 2.	2	0	<input type="checkbox"/> 5.	5	5	<input type="checkbox"/> 9.	9	25
			<input type="checkbox"/> 6.	6	10	<input type="checkbox"/> 10.	10	30

Code Number Checked: 7Total Points Factor 4: 15



## NPDES PERMIT RATING WORK SHEET

## FACTOR 5: Water Quality Factors

- A. *Is (or will) one or more of the effluent discharge limits based on water quality factors of the receiving stream (rather than technology-base federal effluent guidelines, or technology-base state effluent guidelines), or has a wasteload allocation been to the discharge*

	Code	Points
<input checked="" type="checkbox"/> YES	1	10
<input type="checkbox"/> NO	2	0

- B. *Is the receiving water in compliance with applicable water quality standards for pollutants that are water quality limited in the permit?*

	Code	Points
<input checked="" type="checkbox"/> YES	1	0
<input type="checkbox"/> NO	2	5

- C. *Does the effluent discharged from this facility exhibit the reasonable potential to violate water quality standards due to whole effluent toxicity?*

	Code	Points
<input type="checkbox"/> YES	1	10
<input checked="" type="checkbox"/> NO	2	0

Code Number Checked: A 1 B 1 C 2  
 Points Factor 5: A 10 + B 0 + C 0 = 10

## FACTOR 6: Proximity to Near Coastal Waters

- A. Base Score: Enter flow code here (from factor 2) 21

Check appropriate facility HPRI code (from PCS):

HPRI#	Code	HPRI Score
<input type="checkbox"/> 1	1	20
<input type="checkbox"/> 2	2	0
<input type="checkbox"/> 3	3	30
<input checked="" type="checkbox"/> 4	4	0
<input type="checkbox"/> 5	5	20

Enter the multiplication factor that corresponds to the flow code: 0.10

Flow Code	Multiplication Factor
11, 31, or 41	0.00
12, 32, or 42	0.05
13, 33, or 43	0.10
14 or 34	0.15
21 or 51	0.10
22 or 52	0.30
23 or 53	0.60
24	1.00

HPRI code checked : 4

Base Score (HPRI Score): 0 X (Multiplication Factor) 0.1 = 0

- B. Additional Points – NEP Program

For a facility that has an HPRI code of 3, does the facility discharge to one of the estuaries enrolled in the National Estuary Protection (NEP) program (see instructions) or the Chesapeake Bay?

Code	Points
<input type="checkbox"/> 1	10
<input checked="" type="checkbox"/> 2	0

- C. Additional Points – Great Lakes Area of Concern

For a facility that has an HPRI code of 5, does the facility discharge any of the pollutants of concern into one of the Great Lakes' 31 area's of concern (see instructions)?

Code	Points
<input type="checkbox"/> 1	10
<input checked="" type="checkbox"/> 2	0

Code Number Checked: A 4 B 2 C 2  
 Points Factor 6: A 0 + B 0 + C 0 = 0

## NPDES PERMIT RATING WORK SHEET

## SCORE SUMMARY

<u>Factor</u>	<u>Description</u>	<u>Total Points</u>
1	Toxic Pollutant Potential	35
2	Flows / Streamflow Volume	10
3	Conventional Pollutants	0
4	Public Health Impacts	15
5	Water Quality Factors	10
6	Proximity to Near Coastal Waters	0
TOTAL (Factors 1 through 6)		70

S1. Is the total score equal to or greater than 80 ☐ YES; (Facility is a Major) ☒ NO

S2. If the answer to the above questions is no, would you like this facility to be discretionary major?

☒ NO

☐ YES; (Add 500 points to the above score and provide reason below:

Reason: \_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

NEW SCORE : 70

OLD SCORE : 70

Permit Reviewer's Name : Joan C. Crowther

Phone Number: (703)583- 3825

Date: June 1, 2011

December 28, 2005

**MEMORANDUM**

**TO:** Permit File

**FROM:** Amy G. Taylor, DEQ-NVRO Water Permits

**SUBJECT:** Site inspection report for the reissuance of VPDES Permit No. VA0058793  
Town of Warrenton Water Treatment Plant, Fauquier County

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The purpose of this memo is to document the observations made during the site inspection that was conducted on December 20, 2005. Present at the inspection was Amy Taylor and Tom Faha of DEQ-NVRO Water Permits, and William Stoddard of the Town of Warrenton Dept. of Public Works.

**Background:**

This facility is a municipally owned reservoir and water treatment plant which currently produces potable drinking water for the residents and businesses of the Town of Warrenton. The reservoir currently has a capacity of 135 million gallons; the water treatment plant has a current production capacity of 2.4 MGD. Raw water is disinfected, clarified and then filtered via 2 Granulated Activated Carbon (GAC) and sand filtration units prior to distribution. A detailed description of the treatment system is as follows:

**WTP Operations:**

The reservoir currently maintains a minimum flow over the dam, even during drought conditions. Copper Sulfate is added during the summer months to control algae growth.

The treatment process consists of chemical addition of Potassium Permanganate after the raw water pumping station, followed by chemical addition of Alum, Lime and Chlorine at the flash mix tank. Following chemical addition water then flows to two (2) flocculation tanks (**Figure 2**) and then to two (2) sedimentation tanks (**Figure 1**) prior to entering two (2) Granulated Activated Carbon (GAC) and sand filtration units. After filtration, processed water then enters the distribution system (**Figure 3**) for dispersal.

The backwash water generated through this treatment process flows to 0.25 MG settling basin (**Figure 4**) where clarified water is then discharged into an unnamed tributary to Cedar Run (Warrenton Reservoir).

Operation of this facility currently returns the supernatant from the settling basin to the head of the plant for use as raw water when feasible. As such, this facility generally does not discharge and has not produced a discharge since approximately 1992.

Settled sludge from both sedimentation tanks is also pumped to the settling basin, where approximately 0.025 MGD of settled sludge is sent weekly to the Warrenton STP for treatment

**Observations:**

All clarifiers and filter systems were in operation at the time of inspection, and all aspects appeared to be functioning properly.

When supernatant is not being recirculated to the head of the plant for reuse as raw water, it is discharged through Outfall 001. However, at the time of inspection backwash water from the setting basin was not being recirculated back to the head of the plant, and all contents of the settling basin were being sent to the Warrenton STP for treatment.

When a discharge does occur, final effluent is discharged through Outfall 001 which is located on a dry ditch within the fenced area of the treatment plant. The dry ditch flows into a natural drainage swale which in turn flows into an unnamed tributary to Warrenton Reservoir (Cedar Run) (**Figures 6-8**).

Various chemicals used in the treatment process were stored in several locations within the treatment plant building; 4 pallets of soda ash, 10 bags of Coppers Sulfate and 6 – 40 lb. barrels of Magnafloc polymer.

Pictures were taken of the receiving stream and the treatment facility and are included as part of this site inspection report.

Town of Warrenton WTP  
VPDES Permit No. VA0058793  
Site Photographs

**Figure 1**



Sedimentation Tanks.

**Figure 2**



Flocculation tanks.

**Figure 3**



3 pumps to distribution system.

**Figure 4**



Storage Tank – backwash water and settled sludge

**Figure 5**



Waste pumps – settled sludge to Warrenton WWTF.

**Figure 6**



Outfall 001 – dry ditch inside fenced area.



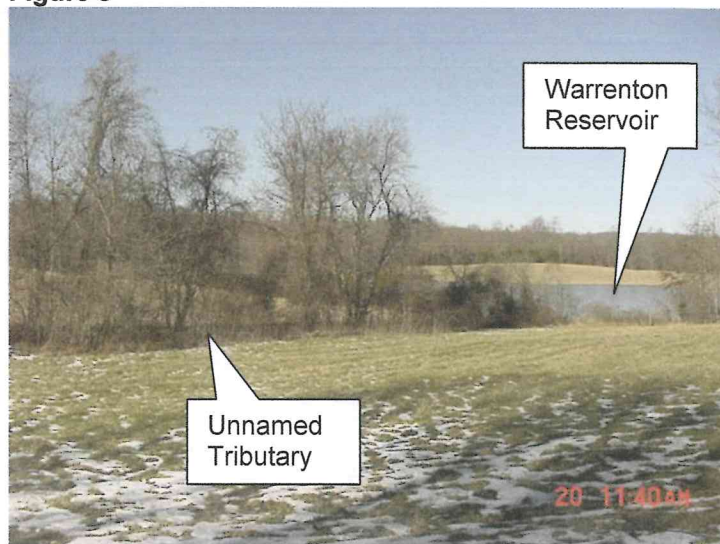
Town of Warrenton WTP  
VPDES Permit No. VA0058793  
Site Photographs

**Figure 7**



Drainage swale leading to unnamed tributary.

**Figure 8**



Unnamed tributary to Warrenton Reservoir (Cedar Run).

**Figure 9**



Cedar Run just south of Warrenton Reservoir.



To: Joan C. Crowther  
From: Jennifer Carlson

Date: March 16, 2011  
Subject: Planning Statement for Town of Warrenton Water Treatment Plant  
Permit No: VA0058793

Discharge Type:	Industrial
Discharge Flow:	N/L
Receiving Stream:	UT to Warrenton Reservoir
Latitude / Longitude:	38°44'26" / 77°47'25"
Rivermile:	0.07
Streamcode:	1aXIY
Waterbody:	VAN-A17R/PL35
Water Quality Stds:	Class III, Sec. 7e, sp stds. PWS, g

1. Is there monitoring data for the receiving stream?

No. There is not any monitoring data for the UT to the Warrenton Reservoir

- If yes, please attach latest summary.
- If no, where is the nearest downstream monitoring station.

The nearest downstream DEQ ambient monitoring station is 1aCER032.15 located on Cedar Run at the Rt. 672 bridge crossing, approximately 0.05 miles downstream of the Warrenton Reservoir. The following is the summary for this portion of Cedar Run, as taken from the 2010 Integrated Report:

*Class III, Section 7a, special stds. g.*

*DEQ ambient water quality monitoring station 1aCER032.15, at Route 672. Citizen monitoring station 1aCER-651-EASI.*

*E. coli monitoring finds a bacterial impairment, resulting in an impaired classification for the recreation use. This impairment is nested within the downstream completed bacteria TMDL for the Cedar Run watershed. The aquatic life and wildlife uses are considered fully supporting. The fish consumption use was not assessed.*

2. Is the receiving stream on the current 303(d) list? No.

- If yes, what is the impairment? N/A
- Has the TMDL been prepared? N/A

- If yes, what is the WLA for the discharge? N/A
- If no, what is the schedule for the TMDL? N/A

3. If the answer to (2) above is no, is there a downstream 303(d) listed impairment?

Yes, downstream of the Reservoir, Cedar Run is listed with an impairment.

- If yes, what is the impairment?

Cedar Run is listed as not meeting the recreation use goal. Sufficient excursions from the maximum E. coli bacteria criterion (2 of 12 samples - 16.7%) were recorded at DEQ's ambient water quality monitoring station (1aCER032.15) at the Route 672 crossing to assess this stream segment as not supporting the recreation use goal for the 2010 water quality assessment.

- Has a TMDL been prepared?

Yes, there is a completed bacteria TMDL for Cedar Run.

- Will the TMDL include the receiving stream?

The unnamed tributary to the Warrenton Reservoir was not specifically included in the TMDL, but all upstream facilities are considered during TMDL development.

- Is there a WLA for the discharge?

This facility did not receive a WLA in the TMDL, as it is not expected to discharge the pollutant of concern (bacteria).

- What is the schedule for the TMDL?

The Cedar Run Bacteria TMDL was completed and approved by EPA on 07/06/2004.

4. Is there monitoring or other conditions that Planning/Assessment needs in the permit?

1. There is a downstream PCB impairment in Occoquan Bay, which is located approximately 52 miles downstream of this facility. A PCB TMDL has been completed for the Potomac River and was approved by EPA on 10/31/2007. This Assessment/TMDL Staff has concluded that low-level PCB monitoring is not warranted for this facility, as it is a water treatment facility and is highly unlikely to discharge any PCBs.
2. There is a completed downstream TMDL for the nutrient impairments for the Chesapeake Bay. However, the Bay TMDL and the WLAs contained within the TMDL are not addressed in this planning statement.
5. Fact Sheet Requirements – Please provide information on other individual VPDES permits or VA DEQ monitoring stations located within a 2 mile radius of the facility. In addition, please provide information on any drinking water intakes located within a 5 mile radius of the facility.

There is a surface water intake for the Town of Warrenton located within a 5 mile radius from the facility. Within a 2 mile radius, there are no other individual VPDES permits; however, there is 1 DEQ water quality monitoring station – 1aCER032.15.

# FRESHWATER WATER QUALITY CRITERIA / WASTELOAD ALLOCATION ANALYSIS

Facility Name: Town of Warrenton Water Treatment Plant

Permit No.: VA0058793

Receiving Stream: Warrenton Reservoir, UT

Version: OWP Guidance Memo 00-2011 (8/24/00)

## Stream Information

Mean Hardness (as CaCO<sub>3</sub>) = mg/L  
90% Temperature (Annual) = deg C  
90% Temperature (Wet season) = deg C  
90% Maximum pH = SU  
10% Maximum pH = SU  
Tier Designation (1 or 2) = 1  
Public Water Supply (PWS) Y/N? = Y  
Trout Present Y/N? = n  
Early Life Stages Present Y/N? = y

## Stream Flows

1Q10 (Annual) = 0 MGD  
7Q10 (Annual) = 0 MGD  
30Q10 (Annual) = 0 MGD  
1Q10 (Wet season) = 0 MGD  
30Q10 (Wet season) = 0 MGD  
30Q5 = 0 MGD  
Harmonic Mean = 0 MGD

## Mixing Information

Annual - 1Q10 Mix = 100 %  
- 7Q10 Mix = 100 %  
- 30Q10 Mix = 100 %  
Wet Season - 1Q10 Mix = 100 %  
- 30Q10 Mix = 100 %

## Effluent Information

Mean Hardness (as CaCO<sub>3</sub>) = 50 mg/L  
90% Temp (Annual) = 30 deg C  
90% Temp (Wet season) = 3 deg C  
90% Maximum pH = 6.47 SU  
10% Maximum pH = 6.47 SU  
Discharge Flow = 0.25 MGD

Parameter (ug/l unless noted)	Background Conc.	Water Quality Criteria			Wasteload Allocations			Antidegradation Baseline			Antidegradation Allocations			Most Limiting Allocations		
		Acute	Chronic	HH (PWS)	HH	Acute	Chronic	HH (PWS)	HH	Acute	Chronic	HH (PWS)	HH	Acute	Chronic	HH (PWS)
Acenaphthene	0	--	--	6.7E+02	9.9E+02	--	--	6.7E+02	9.9E+02	--	--	--	--	--	6.7E+02	9.9E+02
Acrolein	0	--	--	6.1E+00	9.3E+00	--	--	6.1E+00	9.3E+00	--	--	--	--	--	6.1E+00	9.3E+00
Acrylonitrile <sup>c</sup>	0	--	--	5.1E-01	2.5E+00	--	--	5.1E-01	2.5E+00	--	--	--	--	--	5.1E-01	2.5E+00
Aldrin <sup>c</sup>	0	3.0E+00	--	4.9E-04	5.0E-04	3.0E+00	--	4.9E-04	5.0E-04	--	--	--	--	3.0E+00	4.9E-04	5.0E-04
Ammonia-N (mg/l)	0	4.94E+01	2.47E+00	--	--	4.9E+01	2.5E+00	--	--	--	--	--	--	4.9E+01	2.5E+00	--
Ammonia-N (mg/l) (High Flow)	0	4.94E+01	6.69E+00	--	--	4.9E+01	6.7E+00	--	--	--	--	--	--	4.9E+01	6.7E+00	--
Anthrachene	0	--	--	8.3E+03	4.0E+04	--	--	8.3E+03	4.0E+04	--	--	--	--	--	8.3E+03	4.0E+04
Antimony	0	--	--	5.6E+00	6.4E+02	--	--	5.6E+00	6.4E+02	--	--	--	--	--	5.6E+00	6.4E+02
Arsenic	0	3.4E+02	1.5E+02	1.0E+01	--	3.4E+02	1.5E+02	1.0E+01	--	--	--	--	--	3.4E+02	1.5E+02	1.0E+01
Barium	0	--	--	2.0E+03	--	--	--	2.0E+03	--	--	--	--	--	--	2.0E+03	--
Benzene <sup>c</sup>	0	--	--	2.2E+01	5.1E+02	--	--	2.2E+01	5.1E+02	--	--	--	--	--	2.2E+01	5.1E+02
Benzidine <sup>c</sup>	0	--	--	8.6E-04	2.0E-03	--	--	8.6E-04	2.0E-03	--	--	--	--	--	8.6E-04	2.0E-03
Benzo (a) anthracene <sup>c</sup>	0	--	--	3.8E-02	1.8E-01	--	--	3.8E-02	1.8E-01	--	--	--	--	--	3.8E-02	1.8E-01
Benzo (b) fluoranthene <sup>c</sup>	0	--	--	3.8E-02	1.8E-01	--	--	3.8E-02	1.8E-01	--	--	--	--	--	3.8E-02	1.8E-01
Benzo (k) fluoranthene <sup>c</sup>	0	--	--	3.8E-02	1.8E-01	--	--	3.8E-02	1.8E-01	--	--	--	--	--	3.8E-02	1.8E-01
Benzo (a) pyrene <sup>c</sup>	0	--	--	3.0E-01	5.3E+00	--	--	3.0E-01	5.3E+00	--	--	--	--	--	3.0E-01	5.3E+00
Bis(2-Chloroethyl) Ether <sup>c</sup>	0	--	--	1.4E+03	6.5E+04	--	--	1.4E+03	6.5E+04	--	--	--	--	--	1.4E+03	6.5E+04
Bis(2-Chloroisopropyl) Ether	0	--	--	1.2E+01	2.2E+01	--	--	1.2E+01	2.2E+01	--	--	--	--	--	1.2E+01	2.2E+01
Bis 2-Ethylhexyl Phthalate <sup>c</sup>	0	--	--	4.3E+01	1.4E+03	--	--	4.3E+01	1.4E+03	--	--	--	--	--	4.3E+01	1.4E+03
Bromoform <sup>c</sup>	0	--	--	1.5E+03	1.9E+03	--	--	1.5E+03	1.9E+03	--	--	--	--	--	1.5E+03	1.9E+03
Butylbenzylphthalate	0	1.8E+00	6.6E-01	5.0E+00	--	1.8E+00	6.6E-01	5.0E+00	--	--	--	--	--	1.8E+00	6.6E-01	5.0E+00
Cadmium	0	--	--	2.3E+00	1.6E+01	--	--	2.3E+00	1.6E+01	--	--	--	--	--	2.3E+00	1.6E+01
Carbon Tetrachloride <sup>c</sup>	0	2.4E+00	4.3E-03	8.0E-03	8.1E-03	2.4E+00	4.3E-03	8.0E-03	8.1E-03	--	--	--	--	2.4E+00	4.3E-03	8.0E-03
Chlordane <sup>c</sup>	0	8.6E+05	2.3E+05	2.5E+05	--	8.6E+05	2.3E+05	2.5E+05	--	--	--	--	--	8.6E+05	2.3E+05	2.5E+05
Chloride	0	1.9E+01	1.1E+01	--	--	1.9E+01	1.1E+01	--	--	--	--	--	--	1.9E+01	1.1E+01	--
TRC	0	--	--	1.3E+02	1.6E+03	--	--	1.3E+02	1.6E+03	--	--	--	--	--	1.3E+02	1.6E+03
Chlorobenzene	0	--	--	1.3E+02	1.6E+03	--	--	1.3E+02	1.6E+03	--	--	--	--	--	1.3E+02	1.6E+03



Parameter (ug/l unless noted)	Background Conc.	Water Quality Criteria				Wasteload Allocations				Antidegradation Baseline				Antidegradation Allocations				Most Limiting Allocations			
		Acute	Chronic	HH (PWS)	HH	Acute	Chronic	HH (PWS)	HH	Acute	Chronic	HH (PWS)	HH	Acute	Chronic	HH (PWS)	HH	Acute	Chronic	HH (PWS)	HH
Chlorobromomethane <sup>c</sup>	0	--	--	4.0E+00	1.3E+02	--	--	4.0E+00	1.3E+02	--	--	--	--	--	--	--	--	--	--	4.0E+00	1.3E+02
Chloroform	0	--	--	3.4E+02	1.1E+04	--	--	3.4E+02	1.1E+04	--	--	--	--	--	--	--	--	--	--	3.4E+02	1.1E+04
2-Chloronaphthalene	0	--	--	1.0E+03	1.6E+03	--	--	1.0E+03	1.6E+03	--	--	--	--	--	--	--	--	--	--	1.0E+03	1.6E+03
2-Chlorophenol	0	--	--	8.1E+01	1.5E+02	--	--	8.1E+01	1.5E+02	--	--	--	--	--	--	--	--	--	--	8.1E+01	1.5E+02
Chlorpyrifos	0	8.3E-02	4.1E-02	--	--	8.3E-02	4.1E-02	--	--	8.3E-02	4.1E-02	--	--	8.3E-02	4.1E-02	--	--	8.3E-02	4.1E-02	--	--
Chromium III	0	3.2E+02	4.2E+01	--	--	3.2E+02	4.2E+01	--	--	3.2E+02	4.2E+01	--	--	3.2E+02	4.2E+01	--	--	3.2E+02	4.2E+01	--	--
Chromium VI	0	1.6E+01	1.1E+01	--	--	1.6E+01	1.1E+01	--	--	1.6E+01	1.1E+01	--	--	1.6E+01	1.1E+01	--	--	1.6E+01	1.1E+01	--	--
Chromium, Total	0	--	--	1.0E+02	--	--	--	1.0E+02	--	--	--	--	--	--	--	--	--	--	--	1.0E+02	--
Chrysene <sup>c</sup>	0	--	--	3.8E-03	1.8E-02	--	--	3.8E-03	1.8E-02	--	--	--	--	--	--	--	--	--	--	3.8E-03	1.8E-02
Copper	0	7.0E+00	5.0E+00	1.3E+03	--	7.0E+00	5.0E+00	1.3E+03	--	7.0E+00	5.0E+00	1.3E+03	--	7.0E+00	5.0E+00	1.3E+03	--	7.0E+00	5.0E+00	1.3E+03	--
Cyanide, Free	0	2.2E+01	5.2E+00	1.4E+02	1.6E+04	2.2E+01	5.2E+00	1.4E+02	1.6E+04	2.2E+01	5.2E+00	1.4E+02	1.6E+04	2.2E+01	5.2E+00	1.4E+02	1.6E+04	2.2E+01	5.2E+00	1.4E+02	1.6E+04
DDD <sup>c</sup>	0	--	--	3.1E-03	3.1E-03	--	--	3.1E-03	3.1E-03	--	--	3.1E-03	3.1E-03	--	--	3.1E-03	3.1E-03	--	--	3.1E-03	3.1E-03
DDE <sup>c</sup>	0	--	--	2.2E-03	2.2E-03	--	--	2.2E-03	2.2E-03	--	--	2.2E-03	2.2E-03	--	--	2.2E-03	2.2E-03	--	--	2.2E-03	2.2E-03
DDT <sup>c</sup>	0	1.1E+00	1.0E-03	2.2E-03	2.2E-03	1.1E+00	1.0E-03	2.2E-03	2.2E-03	1.1E+00	1.0E-03	2.2E-03	2.2E-03	1.1E+00	1.0E-03	2.2E-03	2.2E-03	1.1E+00	1.0E-03	2.2E-03	2.2E-03
Demeton	0	--	1.0E-01	--	--	--	1.0E-01	--	--	--	1.0E-01	--	--	--	1.0E-01	--	--	--	1.0E-01	--	--
Diazinon	0	1.7E-01	1.7E-01	--	--	1.7E-01	1.7E-01	--	--	1.7E-01	1.7E-01	--	--	1.7E-01	1.7E-01	--	--	1.7E-01	1.7E-01	--	--
Dibenz(a,h)anthracene <sup>c</sup>	0	--	--	3.8E-02	1.8E-01	--	--	3.8E-02	1.8E-01	--	--	3.8E-02	1.8E-01	--	--	3.8E-02	1.8E-01	--	--	3.8E-02	1.8E-01
1,2-Dichlorobenzene	0	--	--	4.2E+02	1.3E+03	--	--	4.2E+02	1.3E+03	--	--	4.2E+02	1.3E+03	--	--	4.2E+02	1.3E+03	--	--	4.2E+02	1.3E+03
1,3-Dichlorobenzene	0	--	--	3.2E+02	9.6E+02	--	--	3.2E+02	9.6E+02	--	--	3.2E+02	9.6E+02	--	--	3.2E+02	9.6E+02	--	--	3.2E+02	9.6E+02
1,4-Dichlorobenzene	0	--	--	6.3E+01	1.9E+02	--	--	6.3E+01	1.9E+02	--	--	6.3E+01	1.9E+02	--	--	6.3E+01	1.9E+02	--	--	6.3E+01	1.9E+02
3,3-Dichlorobenzidine <sup>c</sup>	0	--	--	2.1E-01	2.8E-01	--	--	2.1E-01	2.8E-01	--	--	2.1E-01	2.8E-01	--	--	2.1E-01	2.8E-01	--	--	2.1E-01	2.8E-01
Dichlorobromomethane <sup>c</sup>	0	--	--	5.5E+00	1.7E+02	--	--	5.5E+00	1.7E+02	--	--	5.5E+00	1.7E+02	--	--	5.5E+00	1.7E+02	--	--	5.5E+00	1.7E+02
1,2-Dichloroethane <sup>c</sup>	0	--	--	3.8E+00	3.7E+02	--	--	3.8E+00	3.7E+02	--	--	3.8E+00	3.7E+02	--	--	3.8E+00	3.7E+02	--	--	3.8E+00	3.7E+02
1,1-Dichloroethylene	0	--	--	3.3E+02	7.1E+03	--	--	3.3E+02	7.1E+03	--	--	3.3E+02	7.1E+03	--	--	3.3E+02	7.1E+03	--	--	3.3E+02	7.1E+03
1,2-trans-dichloroethylene	0	--	--	1.4E+02	1.0E+04	--	--	1.4E+02	1.0E+04	--	--	1.4E+02	1.0E+04	--	--	1.4E+02	1.0E+04	--	--	1.4E+02	1.0E+04
2,4-Dichlorophenol	0	--	--	7.7E+01	2.9E+02	--	--	7.7E+01	2.9E+02	--	--	7.7E+01	2.9E+02	--	--	7.7E+01	2.9E+02	--	--	7.7E+01	2.9E+02
2,4-Dichlorophenoxy acetic acid (2,4-D)	0	--	--	1.0E+02	--	--	--	1.0E+02	--	--	--	1.0E+02	--	--	--	1.0E+02	--	--	--	1.0E+02	--
1,2-Dichloropropane <sup>c</sup>	0	--	--	5.0E+00	1.5E+02	--	--	5.0E+00	1.5E+02	--	--	5.0E+00	1.5E+02	--	--	5.0E+00	1.5E+02	--	--	5.0E+00	1.5E+02
1,3-Dichloropropene <sup>c</sup>	0	--	--	3.4E+00	2.1E+02	--	--	3.4E+00	2.1E+02	--	--	3.4E+00	2.1E+02	--	--	3.4E+00	2.1E+02	--	--	3.4E+00	2.1E+02
Dieldrin <sup>c</sup>	0	2.4E-01	5.6E-02	5.2E-04	5.4E-04	2.4E-01	5.6E-02	5.2E-04	5.4E-04	2.4E-01	5.6E-02	5.2E-04	5.4E-04	2.4E-01	5.6E-02	5.2E-04	5.4E-04	2.4E-01	5.6E-02	5.2E-04	5.4E-04
Diethyl Phthalate	0	--	--	1.7E+04	4.4E+04	--	--	1.7E+04	4.4E+04	--	--	1.7E+04	4.4E+04	--	--	1.7E+04	4.4E+04	--	--	1.7E+04	4.4E+04
2,4-Dimethylphenol	0	--	--	3.8E+02	8.5E+02	--	--	3.8E+02	8.5E+02	--	--	3.8E+02	8.5E+02	--	--	3.8E+02	8.5E+02	--	--	3.8E+02	8.5E+02
Dimethyl Phthalate	0	--	--	2.7E+05	1.1E+06	--	--	2.7E+05	1.1E+06	--	--	2.7E+05	1.1E+06	--	--	2.7E+05	1.1E+06	--	--	2.7E+05	1.1E+06
Di-n-Butyl Phthalate	0	--	--	2.0E+03	4.5E+03	--	--	2.0E+03	4.5E+03	--	--	2.0E+03	4.5E+03	--	--	2.0E+03	4.5E+03	--	--	2.0E+03	4.5E+03
2,4-Dinitrophenol	0	--	--	6.9E+01	5.3E+03	--	--	6.9E+01	5.3E+03	--	--	6.9E+01	5.3E+03	--	--	6.9E+01	5.3E+03	--	--	6.9E+01	5.3E+03
2-Methyl-4,6-Dinitrophenol	0	--	--	1.3E+01	2.8E+02	--	--	1.3E+01	2.8E+02	--	--	1.3E+01	2.8E+02	--	--	1.3E+01	2.8E+02	--	--	1.3E+01	2.8E+02
2,4-Dinitrotoluene <sup>c</sup>	0	--	--	1.1E+00	3.4E+01	--	--	1.1E+00	3.4E+01	--	--	1.1E+00	3.4E+01	--	--	1.1E+00	3.4E+01	--	--	1.1E+00	3.4E+01
Dioxin 2,3,7,8- tetrachlorodibenzo-p-dioxin	0	--	--	5.0E-08	5.1E-08	--	--	5.0E-08	5.1E-08	--	--	5.0E-08	5.1E-08	--	--	5.0E-08	5.1E-08	--	--	5.0E-08	5.1E-08
1,2-Diphenylhydrazine <sup>c</sup>	0	--	--	3.6E-01	2.0E+00	--	--	3.6E-01	2.0E+00	--	--	3.6E-01	2.0E+00	--	--	3.6E-01	2.0E+00	--	--	3.6E-01	2.0E+00
Alpha-Endosulfan	0	2.2E-01	5.6E-02	6.2E+01	8.9E+01	2.2E-01	5.6E-02	6.2E+01	8.9E+01	2.2E-01	5.6E-02	6.2E+01	8.9E+01	2.2E-01	5.6E-02	6.2E+01	8.9E+01	2.2E-01	5.6E-02	6.2E+01	8.9E+01
Beta-Endosulfan	0	2.2E-01	5.6E-02	6.2E+01	8.9E+01	2.2E-01	5.6E-02	6.2E+01	8.9E+01	2.2E-01	5.6E-02	6.2E+01	8.9E+01	2.2E-01	5.6E-02	6.2E+01	8.9E+01	2.2E-01	5.6E-02	6.2E+01	8.9E+01
Alpha + Beta Endosulfan	0	2.2E-01	5.6E-02	--	--	2.2E-01	5.6E-02	--	--	2.2E-01	5.6E-02	--	--	2.2E-01	5.6E-02	--	--	2.2E-01	5.6E-02	--	--
Endosulfan Sulfate	0	--	--	6.2E+01	8.9E+01	--	--	6.2E+01	8.9E+01	--	--	6.2E+01	8.9E+01	--	--	6.2E+01	8.9E+01	--	--	6.2E+01	8.9E+01
Endrin	0	8.6E-02	3.6E-02	5.9E-02	6.0E-02	8.6E-02	3.6E-02	5.9E-02	6.0E-02	8.6E-02	3.6E-02	5.9E-02	6.0E-02	8.6E-02	3.6E-02	5.9E-02	6.0E-02	8.6E-02	3.6E-02	5.9E-02	6.0E-02
Endrin Aldehyde	0	--	--	2.9E-01	3.0E-01	--	--	2.9E-01	3.0E-01	--	--	2.9E-01	3.0E-01	--	--	2.9E-01	3.0E-01	--	--	2.9E-01	3.0E-01

Parameter (ug/l unless noted)	Background Conc.	Water Quality Criteria				Wasteload Allocations				Antidegradation Baseline				Antidegradation Allocations				Most Limiting Allocations			
		Acute	Chronic	HH (PWS)	HH	Acute	Chronic	HH (PWS)	HH	Acute	Chronic	HH (PWS)	HH	Acute	Chronic	HH (PWS)	HH	Acute	Chronic	HH (PWS)	HH
Ethylbenzene	0	--	--	5.3E+02	2.1E+03	--	--	5.3E+02	2.1E+03	--	--	--	--	--	--	--	--	--	--	5.3E+02	2.1E+03
Fluoranthene	0	--	--	1.3E+02	1.4E+02	--	--	1.3E+02	1.4E+02	--	--	--	--	--	--	--	--	--	--	1.3E+02	1.4E+02
Fluorene	0	--	--	1.1E+03	5.3E+03	--	--	1.1E+03	5.3E+03	--	--	--	--	--	--	--	--	--	--	1.1E+03	5.3E+03
Foaming Agents	0	--	--	5.0E+02	--	--	--	5.0E+02	--	--	--	--	--	--	--	--	--	--	--	5.0E+02	--
Guthion	0	--	1.0E-02	--	--	--	1.0E-02	--	--	--	--	--	--	--	--	--	--	--	1.0E-02	--	--
Heptachlor <sup>c</sup>	0	5.2E-01	3.8E-03	7.9E-04	7.9E-04	5.2E-01	3.8E-03	7.9E-04	7.9E-04	--	--	--	--	--	--	--	--	5.2E-01	3.8E-03	7.9E-04	7.9E-04
Heptachlor Epoxide <sup>c</sup>	0	5.2E-01	3.8E-03	3.9E-04	3.9E-04	5.2E-01	3.8E-03	3.9E-04	3.9E-04	--	--	--	--	--	--	--	--	5.2E-01	3.8E-03	3.9E-04	3.9E-04
Hexachlorobenzene <sup>c</sup>	0	--	--	2.8E-03	2.9E-03	--	--	2.8E-03	2.9E-03	--	--	--	--	--	--	--	--	--	--	2.8E-03	2.9E-03
Hexachlorobutadiene <sup>c</sup>	0	--	--	4.4E+00	1.8E+02	--	--	4.4E+00	1.8E+02	--	--	--	--	--	--	--	--	--	--	4.4E+00	1.8E+02
Hexachlorocyclohexane	0	--	--	2.6E-02	4.9E-02	--	--	2.6E-02	4.9E-02	--	--	--	--	--	--	--	--	--	--	2.6E-02	4.9E-02
Alpha-BHC <sup>c</sup>	0	--	--	9.1E-02	1.7E-01	--	--	9.1E-02	1.7E-01	--	--	--	--	--	--	--	--	--	--	9.1E-02	1.7E-01
Beta-BHC <sup>c</sup>	0	--	--	9.8E-01	1.8E+00	9.5E-01	--	9.8E-01	1.8E+00	--	--	--	--	--	--	--	--	9.5E-01	--	9.8E-01	1.8E+00
Hexachlorocyclohexane	0	--	--	4.0E+01	1.1E+03	--	--	4.0E+01	1.1E+03	--	--	--	--	--	--	--	--	--	--	4.0E+01	1.1E+03
Gamma-BHC <sup>c</sup> (Lindane)	0	--	--	1.4E+01	3.3E+01	--	--	1.4E+01	3.3E+01	--	--	--	--	--	--	--	--	--	--	1.4E+01	3.3E+01
Hexachlorocyclopentadiene	0	--	2.0E+00	--	--	--	2.0E+00	--	--	--	--	--	--	--	--	--	--	--	2.0E+00	--	--
Hexachloroethane <sup>c</sup>	0	--	--	3.8E-02	1.8E-01	--	--	3.8E-02	1.8E-01	--	--	--	--	--	--	--	--	--	--	3.8E-02	1.8E-01
Hydrogen Sulfide	0	--	--	3.0E+02	--	--	--	3.0E+02	--	--	--	--	--	--	--	--	--	--	--	3.0E+02	--
Indeno (1,2,3-cd) pyrene <sup>c</sup>	0	--	--	3.5E+02	9.6E+03	--	--	3.5E+02	9.6E+03	--	--	--	--	--	--	--	--	--	--	3.5E+02	9.6E+03
Iron	0	--	0.0E+00	--	--	--	0.0E+00	--	--	--	--	--	--	--	--	--	--	--	--	0.0E+00	--
Isophorone <sup>c</sup>	0	4.9E+01	5.6E+00	1.5E+01	--	4.9E+01	5.6E+00	1.5E+01	--	--	--	--	--	--	--	--	--	4.9E+01	5.6E+00	1.5E+01	--
Kepone	0	--	1.0E-01	--	--	--	1.0E-01	--	--	--	--	--	--	--	--	--	--	--	--	1.0E-01	--
Lead	0	--	--	5.0E+01	--	--	--	5.0E+01	--	--	--	--	--	--	--	--	--	--	--	5.0E+01	--
Malathion	0	1.4E+00	7.7E-01	--	--	1.4E+00	7.7E-01	--	--	--	--	--	--	--	--	--	--	1.4E+00	7.7E-01	--	--
Manganese	0	--	--	4.7E+01	1.5E+03	--	--	4.7E+01	1.5E+03	--	--	--	--	--	--	--	--	--	--	4.7E+01	1.5E+03
Mercury	0	--	--	4.6E+01	5.9E+03	--	--	4.6E+01	5.9E+03	--	--	--	--	--	--	--	--	--	--	4.6E+01	5.9E+03
Methyl Bromide	0	--	3.0E-02	1.0E+02	--	--	3.0E-02	1.0E+02	--	--	--	--	--	--	--	--	--	--	--	3.0E-02	1.0E+02
Methylene Chloride <sup>c</sup>	0	--	0.0E+00	--	--	--	0.0E+00	--	--	--	--	--	--	--	--	--	--	--	--	0.0E+00	--
Methoxychlor	0	1.0E+02	1.1E+01	6.1E+02	4.6E+03	1.0E+02	1.1E+01	6.1E+02	4.6E+03	--	--	--	--	--	--	--	--	1.0E+02	1.1E+01	6.1E+02	4.6E+03
Mirex	0	--	--	1.0E+04	--	--	--	1.0E+04	--	--	--	--	--	--	--	--	--	--	--	1.0E+04	--
Nickel	0	--	--	1.7E+01	6.9E+02	--	--	1.7E+01	6.9E+02	--	--	--	--	--	--	--	--	--	--	1.7E+01	6.9E+02
Nitrate (as N)	0	--	--	6.9E-03	3.0E+01	--	--	6.9E-03	3.0E+01	--	--	--	--	--	--	--	--	--	--	6.9E-03	3.0E+01
Nitrobenzene	0	--	--	3.3E+01	6.0E+01	--	--	3.3E+01	6.0E+01	--	--	--	--	--	--	--	--	--	--	3.3E+01	6.0E+01
N-Nitrosodimethylamine <sup>c</sup>	0	--	5.0E-02	5.1E+00	--	--	--	5.0E-02	5.1E+00	--	--	--	--	--	--	--	--	--	--	5.0E-02	5.1E+00
N-Nitrosodiphenylamine <sup>c</sup>	0	2.8E+01	6.6E+00	--	--	2.8E+01	6.6E+00	--	--	--	--	--	--	--	--	--	--	2.8E+01	6.6E+00	--	--
N-Nitrosodi-n-propylamine <sup>c</sup>	0	6.5E-02	1.3E-02	--	--	6.5E-02	1.3E-02	--	--	--	--	--	--	--	--	--	--	6.5E-02	1.3E-02	--	--
Nonylphenol	0	--	1.4E-02	6.4E-04	6.4E-04	--	1.4E-02	6.4E-04	6.4E-04	--	--	--	--	--	--	--	--	--	--	1.4E-02	6.4E-04
Parathion	0	5.1E+00	3.9E+00	2.7E+00	3.0E+01	5.1E+00	3.9E+00	2.7E+00	3.0E+01	--	--	--	--	--	--	--	--	5.1E+00	3.9E+00	2.7E+00	3.0E+01
PCB Total <sup>c</sup>	0	--	--	1.0E+04	8.6E+05	--	--	1.0E+04	8.6E+05	--	--	--	--	--	--	--	--	--	--	1.0E+04	8.6E+05
Pentachlorophenol <sup>c</sup>	0	--	--	8.3E+02	4.0E+03	--	--	8.3E+02	4.0E+03	--	--	--	--	--	--	--	--	--	--	8.3E+02	4.0E+03
Phenol	0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Pyrene	0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Radionuclides	0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Gross Alpha Activity (pCi/L)	0	--	--	1.5E+01	--	--	--	1.5E+01	--	--	--	--	--	--	--	--	--	--	--	1.5E+01	--
Beta and Photon Activity (mrem/yr)	0	--	--	4.0E+00	4.0E+00	--	--	4.0E+00	4.0E+00	--	--	--	--	--	--	--	--	--	--	4.0E+00	4.0E+00
Radium 226 + 228 (pCi/L)	0	--	--	5.0E+00	--	--	--	5.0E+00	--	--	--	--	--	--	--	--	--	--	--	5.0E+00	--
Uranium (ug/l)	0	--	--	3.0E+01	--	--	--	3.0E+01	--	--	--	--	--	--	--	--	--	--	--	3.0E+01	--



Parameter (ug/l unless noted)	Background Conc.	Water Quality Criteria				Wasteload Allocations				Antidegradation Baseline				Antidegradation Allocations				Most Limiting Allocations			
		Acute	Chronic	HH (PWS)	HH	Acute	Chronic	HH (PWS)	HH	Acute	Chronic	HH (PWS)	HH	Acute	Chronic	HH (PWS)	HH	Acute	Chronic	HH (PWS)	HH
Selenium, Total Recoverable	0	2.0E+01	5.0E+00	1.7E+02	4.2E+03	2.0E+01	5.0E+00	1.7E+02	4.2E+03	--	--	--	--	--	--	--	--	2.0E+01	5.0E+00	1.7E+02	4.2E+03
Silver	0	1.0E+00	--	--	--	1.0E+00	--	--	--	--	--	--	--	--	--	--	--	1.0E+00	--	--	--
Sulfate	0	--	--	2.5E+05	--	--	--	2.5E+05	--	--	--	--	--	--	--	--	--	--	--	2.5E+05	--
1,1,2,2-Tetrachloroethane <sup>c</sup>	0	--	--	1.7E+00	4.0E+01	--	--	1.7E+00	4.0E+01	--	--	--	--	--	--	--	--	--	--	1.7E+00	4.0E+01
Tetrachloroethylene <sup>c</sup>	0	--	--	6.9E+00	3.3E+01	--	--	6.9E+00	3.3E+01	--	--	--	--	--	--	--	--	--	--	6.9E+00	3.3E+01
Thallium	0	--	--	2.4E-01	4.7E-01	--	--	2.4E-01	4.7E-01	--	--	--	--	--	--	--	--	--	--	2.4E-01	4.7E-01
Toluene	0	--	--	5.1E+02	6.0E+03	--	--	5.1E+02	6.0E+03	--	--	--	--	--	--	--	--	--	--	5.1E+02	6.0E+03
Total dissolved solids	0	--	--	5.0E+05	--	--	--	5.0E+05	--	--	--	--	--	--	--	--	--	--	--	5.0E+05	--
Toxaphene <sup>c</sup>	0	7.3E-01	2.0E-04	2.8E-03	2.8E-03	7.3E-01	2.0E-04	2.8E-03	2.8E-03	--	--	--	--	--	--	--	--	7.3E-01	2.0E-04	2.8E-03	2.8E-03
Tributyltin	0	4.6E-01	7.2E-02	--	--	4.6E-01	7.2E-02	--	--	--	--	--	--	--	--	--	--	4.6E-01	7.2E-02	--	--
1,2,4-Trichlorobenzene	0	--	--	3.5E+01	7.0E+01	--	--	3.5E+01	7.0E+01	--	--	--	--	--	--	--	--	--	--	3.5E+01	7.0E+01
1,1,2-Trichloroethane <sup>c</sup>	0	--	--	5.9E+00	1.6E+02	--	--	5.9E+00	1.6E+02	--	--	--	--	--	--	--	--	--	--	5.9E+00	1.6E+02
Trichloroethylene <sup>c</sup>	0	--	--	2.5E+01	3.0E+02	--	--	2.5E+01	3.0E+02	--	--	--	--	--	--	--	--	--	--	2.5E+01	3.0E+02
2,4,6-Trichlorophenol <sup>c</sup>	0	--	--	1.4E+01	2.4E+01	--	--	1.4E+01	2.4E+01	--	--	--	--	--	--	--	--	--	--	1.4E+01	2.4E+01
2-(2,4,5-Trichlorophenoxy) propionic acid (Silvex)	0	--	--	5.0E+01	--	--	--	5.0E+01	--	--	--	--	--	--	--	--	--	--	--	5.0E+01	--
Vinyl Chloride <sup>c</sup>	0	--	--	2.5E-01	2.4E+01	--	--	2.5E-01	2.4E+01	--	--	--	--	--	--	--	--	--	--	2.5E-01	2.4E+01
Zinc	0	6.5E+01	6.6E+01	7.4E+03	2.6E+04	6.5E+01	6.6E+01	7.4E+03	2.6E+04	--	--	--	--	--	--	--	--	6.5E+01	6.6E+01	7.4E+03	2.6E+04

Notes:

- All concentrations expressed as micrograms/liter (ug/l), unless noted otherwise
- Discharge flow is highest monthly average or Form 2C maximum for Industries and design flow for Municipals
- Metals measured as Dissolved, unless specified otherwise
- "C" indicates a carcinogenic parameter
- Regular WLAs are mass balances (minus background concentration) using the % of stream flow entered above under Mixing Information.  
Antidegradation WLAs are based upon a complete mix.
- Antideg. Baseline = (0.25(WQC - background conc.) + background conc.) for acute and chronic  
= (0.1(WQC - background conc.) + background conc.) for human health
- WLAs established at the following stream flows: 1Q10 for Acute, 30Q10 for Chronic Ammonia, 7Q10 for Other Chronic, 30Q5 for Non-carcinogens and Harmonic Mean for Carcinogens. To apply mixing ratios from a model set the stream flow equal to (mixing ratio - 1), effluent flow equal to 1 and 100% mix.

Metal	Target Value (SSTV)
Antimony	5.6E+00
Arsenic	1.0E+01
Barium	2.0E+03
Cadmium	3.9E-01
Chromium III	2.5E+01
Chromium VI	6.4E+00
Copper	2.8E+00
Iron	3.0E+02
Lead	3.4E+00
Manganese	5.0E+01
Mercury	4.6E-01
Nickel	6.8E+00
Selenium	3.0E+00
Silver	4.2E-01
Zinc	2.6E+01

Note: do not use QL's lower than the minimum QL's provided in agency guidance

# 0.250 MGD DISCHARGE FLOW - STREAM MIX PER "Mix.exe"

Discharge Flow Used for WQS-WLA Calculations (MG)0.250				Ammonia - Dry Season - Acute		Ammonia - Dry Season - Chronic	
Stream Flows				90th Percentile pH (SU)		90th Percentile Temp. (deg C)	
Allocated to Mix (MGD)				(7.204 - pH)		(7.204 - pH)	
Dry Season	Wet Season	Dry Season	Wet Season	Trout Present Criterion (mg N/L)		Early LS Present Criterion (mg N)	
1Q10	0.000	0.250	0.250	Trout Absent Criterion (mg N/L)	Early LS Absent Criterion (mg N)		
7Q10	0.000	0.250	N/A	Trout Present?	Early Life Stages Present?		
30Q10	0.000	0.250	0.250	Effective Criterion (mg N/L)	Effective Criterion (mg N/L)		
30Q5	0.000	0.250	N/A	n			
Harm. Mean	0.000	0.250	N/A	49.367			
Annual Avg.	0.000	0.250	N/A	49.367			
Stream/Discharge Mix Values				Ammonia - Wet Season - Acute		Ammonia - Wet Season - Chronic	
				90th Percentile pH (SU)		90th Percentile Temp. (deg C)	
				(7.204 - pH)		(7.204 - pH)	
Dry Season	Wet Season	Dry Season	Wet Season	Trout Present Criterion (mg N/L)		Early LS Present Criterion (mg N)	
1Q10	0.000	0.250	0.250	Trout Absent Criterion (mg N/L)	Early LS Absent Criterion (mg N)		
7Q10	0.000	0.250	N/A	Trout Present?	Early Life Stages Present?		
30Q10	0.000	0.250	0.250	Effective Criterion (mg N/L)	Effective Criterion (mg N/L)		
30Q5	0.000	0.250	N/A	n			
Harm. Mean	0.000	0.250	N/A	49.367			
Annual Avg.	0.000	0.250	N/A	49.367			
Formula Inputs				Ammonia - Wet Season - Acute		Ammonia - Wet Season - Chronic	
				90th Percentile pH (SU)		90th Percentile Temp. (deg C)	
				(7.204 - pH)		(7.204 - pH)	
Calculated	Formula	Inputs		Trout Present Criterion (mg N/L)		Early LS Present Criterion (mg N)	
50.0	50.0	50.0		Trout Absent Criterion (mg N/L)	Early LS Absent Criterion (mg N)		
50.0	50.0	50.0		Trout Present?	Early Life Stages Present?		
				Effective Criterion (mg N/L)	Effective Criterion (mg N/L)		
				n			
				49.367			
				n			
				49.367			

# 0.250 MGD DISCHARGE FLOW - COMPLETE STREAM MIX

Discharge Flow Used for WQS-WLA Calculations (MG)				0.250	
100% Stream Flows				Total Mix Flows	
Allocated to Mix (MGD)				Stream + Discharge (MGD)	
	Dry Season	Wet Season	Dry Season	Wet Season	
1Q10	0.000	0.000	0.250	0.250	
7Q10	0.000	N/A	0.250	N/A	
30Q10	0.000	0.000	0.250	0.250	
30Q5	0.000	N/A	0.250	N/A	
Harm. Mean	0.000	N/A	0.250	N/A	
Annual Avg.	0.000	N/A	0.250	N/A	
Stream/Discharge Mix Values					
	Dry Season	Wet Season		Dry Season	Wet Season
1Q10 90th% Temp. Mix (deg C)	30.000	3.000			
30Q10 90th% Temp. Mix (deg C)	30.000	3.000			
1Q10 90th% pH Mix (SU)	6.470	6.470			
30Q10 90th% pH Mix (SU)	6.470	6.470			
1Q10 10th% pH Mix (SU)	6.470	N/A			
7Q10 10th% pH Mix (SU)	6.470	N/A			
Formula Inputs					
1Q10 Hardness (mg/L as CaCO3) =	50.000	50.000			
7Q10 Hardness (mg/L as CaCO3) =	50.000	50.000			

Ammonia - Dry Season - Acute		Ammonia - Dry Season - Chronic	
90th Percentile pH (SU)	6.470	90th Percentile Temp. (deg C)	30.000
(7.204 - pH)	0.734	90th Percentile pH (SU)	6.470
(pH - 7.204)	-0.734	MIN	1.050
		MAX	30.000
Trout Present Criterion (mg N/l)	32.968	(7.688 - pH)	1.218
Trout Absent Criterion (mg N/L)	49.367	(pH - 7.688)	-1.218
Trout Present?	n		
Effective Criterion (mg N/L)	49.367	Early LS Present Criterion (mg N)	2.467
		Early LS Absent Criterion (mg N)	2.467
		Early Life Stages Present?	y
		Effective Criterion (mg N/L)	2.467

Ammonia - Wet Season - Acute		Ammonia - Wet Season - Chronic	
90th Percentile pH (SU)	6.470	90th Percentile Temp. (deg C)	3.000
(7.204 - pH)	0.734	90th Percentile pH (SU)	6.470
(pH - 7.204)	-0.734	MIN	2.850
		MAX	7.000
Trout Present Criterion (mg N/l)	32.968	(7.688 - pH)	1.218
Trout Absent Criterion (mg N/L)	49.367	(pH - 7.688)	-1.218
Trout Present?	n		
Effective Criterion (mg N/L)	49.367	Early LS Present Criterion (mg N)	6.693
		Early LS Absent Criterion (mg N)	10.867
		Early Life Stages Present?	y
		Effective Criterion (mg N/L)	6.693



## Define Point of Interest

38,44,25.8 -77,47,24.9

is the Search Point

Submit

Cancel

## Search Point

- ☒ Change to "clicked" map point
- ☐ Fixed at 38,44,25.8 - 77,47,24.9

## Show Position Rings

- ☒ Yes ☐ No

1 mile and 1/4 mile at the Search Point

## Show Search Area

- ☒ Yes ☐ No

2 Search distance miles radius

Search Point is at map center



Base Map [Choices](#)

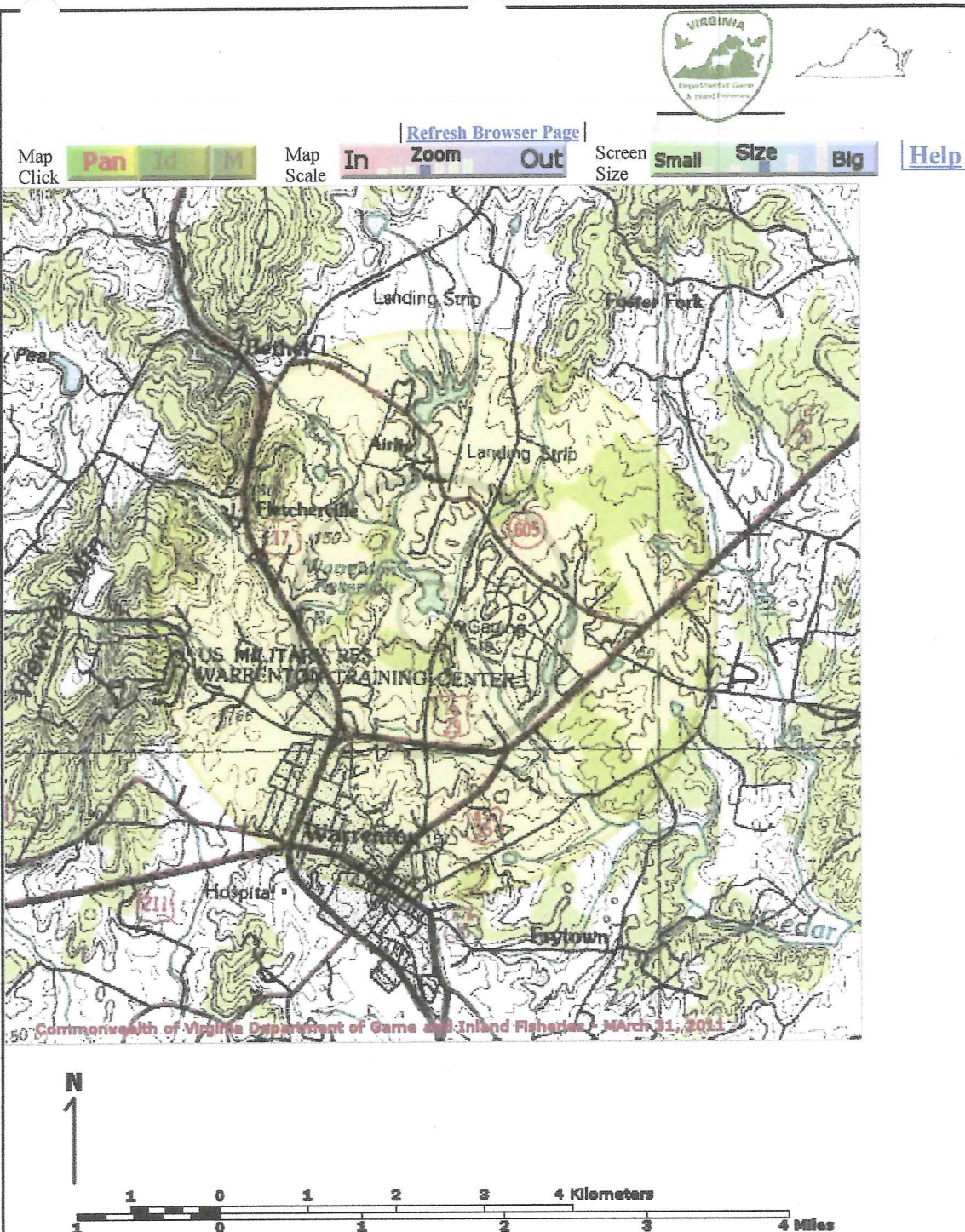
Topography

Map Overlay [Choices](#)

Current List: Position, Search

## Map Overlay Legend

-  Position Rings  
1 mile and 1/4 mile at the Search Point
-  2 mile radius Search Area



Point of Search 38,44,25.8 -77,47,24.9

Map Location 38,44,25.8 -77,47,24.9

Select Coordinate System: ☒ Degrees, Minutes, Seconds Latitude - Longitude

☐ Decimal Degrees Latitude - Longitude

☐ Meters UTM NAD83 East North Zone

☐ Meters UTM NAD27 East North Zone

Base Map source: USGS 1:100,000 topographic maps (see [Microsoft terraserver-usa.com](http://Microsoft.terraserver-usa.com) for details)

Map projection is UTM Zone 18 NAD 1983 with left 252698 and top 4296489. Pixel size is 16 meters. Coordinates displayed are Degrees, Minutes, Seconds North and West. Map is currently displayed as 600 columns by 600 rows for a total of 360000 pixels. The map display represents 9600 meters east to west by 9600 meters north to south for a total of 92.1 square kilometers. The map display represents 31501 feet to west by 31501 feet north to south for a total of 35.5 square miles.

Attachment 5

Topographic maps and Black and white aerial photography for year 1990+-  
are from the United States Department of the Interior, United States Geological Survey.  
Color aerial photography aquired 2002 is from Virginia Base Mapping Program, Virginia Geographic  
Information Network.  
Shaded topographic maps are from TOPO! ©2006 National Geographic  
<http://www.national.geographic.com/topo>  
All other map products are from the Commonwealth of Virginia Department of Game and Inland Fisheries.

map assembled 2011-03-31 15:43:53 (qa/qc July 20, 2010 10:15 - tn=332176.0 dist=3218 I )

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# Virginia Department of Game and Inland Fisheries

3/31/2011 3:43:05 PM

## Fish and Wildlife Information Service

### VaFWIS Initial Project Assessment Report

Compiled on

[Help](#)

3/31/2011, 3:43:05 PM 332176.0

Known or likely to occur within a **2 mile radius of 38,44,25.9 77,47,24.9**  
in **061 Fauquier County, VA**

428 Known or Likely Species ordered by Status Concern for Conservation  
(displaying first 20) (19 species with Status\* or Tier I\*\* or Tier II\*\*)

<a href="#">BOVA Code</a>	<a href="#">Status*</a>	<a href="#">Tier**</a>	<a href="#">Common Name</a>	<a href="#">Scientific Name</a>	Confirmed	Database(s)
060003	FESE	II	<a href="#">Wedgemussel, dwarf</a>	Alasmidonta heterodon		BOVA,HU6
040129	ST	I	<a href="#">Sandpiper, upland</a>	Bartramia longicauda		BOVA
040293	ST	I	<a href="#">Shrike, loggerhead</a>	Lanius ludovicianus		BOVA
040379	ST	I	<a href="#">Sparrow, Henslow's</a>	Ammodramus henslowii		BOVA
040093	FSST	II	<a href="#">Eagle, bald</a>	Haliaeetus leucocephalus		BOVA,HU6
060081	ST	II	<a href="#">Floater, green</a>	Lasmigona subviridis		HU6
040292	ST		<a href="#">Shrike, migrant loggerhead</a>	Lanius ludovicianus migrans		BOVA
100248	FS	I	<a href="#">Fritillary, regal</a>	Speyeria idalia idalia		BOVA,HU6
060029	FS	III	<a href="#">Lance, yellow</a>	Elliptio lanceolata		BOVA,HU6
030063	CC	III	<a href="#">Turtle, spotted</a>	Clemmys guttata		BOVA
030012	CC	IV	<a href="#">Rattlesnake, timber</a>	Crotalus horridus		BOVA,HU6
040225		I	<a href="#">Sapsucker, yellow-bellied</a>	Sphyrapicus varius		BOVA
040319		I	<a href="#">Warbler, black-throated green</a>	Dendroica virens		BOVA
040306		I	<a href="#">Warbler, golden-winged</a>	Vermivora chrysoptera		BOVA
040052		II	<a href="#">Duck, American black</a>	Anas rubripes		BOVA,HU6
040213		II	<a href="#">Owl, northern saw-whet</a>	Aegolius acadicus		HU6
040105		II	<a href="#">Rail, king</a>	Rallus elegans		BOVA

040320		II	<a href="#">Warbler, cerulean</a>	Dendroica cerulea		BOVA,HU6
040266		II	<a href="#">Wren, winter</a>	Troglodytes troglodytes		BOVA
030068		III	<a href="#">Turtle, eastern box</a>	Terrapene carolina carolina	<a href="#">Yes</a>	Collections,BOVA,HU6

To view **All 428 species** [View 428](#)

\* FE=Federal Endangered; FT=Federal Threatened; SE=State Endangered; ST=State Threatened; FP=Federal Proposed; FC=Federal Candidate; FS=Federal Species of Concern; SC=State Candidate; CC=Collection Concern; SS=State Special Concern (obsolete January 1, 2011)

\*\* I=VA Wildlife Action Plan - Tier I - Critical Conservation Need; II=VA Wildlife Action Plan - Tier II - Very High Conservation Need; III=VA Wildlife Action Plan - Tier III - High Conservation Need; IV=VA Wildlife Action Plan - Tier IV - Moderate Conservation Need

### Anadromous Fish Use Streams

N/A

### Colonial Water Bird Survey

N/A

### Threatened and Endangered Waters

N/A

### Managed Trout Streams

N/A

### Bald Eagle Concentration Areas and Roosts

N/A

### Habitat Predicted for Aquatic WAP Tier I & II Species

N/A

### Habitat Predicted for Terrestrial WAP Tier I & II Species

N/A



**Public Holdings:** ( 1 names )

Name	Agency	Level
Warrenton Military Training Reservation	Department of the Defense	Federal

audit no. 332176 3/31/2011 3:43:05 PM Virginia Fish and Wildlife Information Service

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6/1/2011 10:06:01 AM

Facility = Town of Warrenton Water Treatment Plant

Chemical = Ammonia

Chronic averaging period = 30

WLAa = 49

WLAc = 2.5

Q.L. = .2

# samples/mo. = 1

# samples/wk. = 1

#### Summary of Statistics:

# observations = 1

Expected Value = .8

Variance = .2304

C.V. = 0.6

97th percentile daily values = 1.94673

97th percentile 4 day average = 1.33103

97th percentile 30 day average = .964842

# < Q.L. = 0

Model used = BPJ Assumptions, type 2 data

No Limit is required for this material

The data are:

0.8

Analysis of the Warrenton WTP effluent data for Chlorine  
Averaging period for standard = 4 days

The statistics for Chlorine are:

Number of values	=	1
Quantification level	=	1
Number < quantification	=	0
Expected value	=	10
Variance	=	36.00001
C.V.	=	.6
97th percentile	=	24.33418
Statistics used	=	Reasonable potential assumptions - Type 2 data

The WLAs for Chlorine are:

Acute WLA	=	.019
Chronic WLA	=	----
Human Health WLA	=	----

Limits are based on acute toxicity and 1 samples/month, 1 samples/week

Maximum daily limit	=	.019
Average weekly limit	=	.019
Average monthly limit	=	.019

Note: The maximum daily limit applies to industrial dischargers  
The average weekly limit applies to POTWs  
The average monthly limit applies to both.

The Data are

10

4/4/2011 4:59:24 PM

Facility = Town of Warrenton Water Treatment Plant  
Chemical = 4, 4 DDT  
Chronic averaging period = 4  
WLAa = 1.1  
WLAc = 0.001  
Q.L. = 0.1  
# samples/mo. = 1  
# samples/wk. = 1

Summary of Statistics:

# observations = 1  
Expected Value =  
Variance =  
C.V. =  
97th percentile daily values =  
97th percentile 4 day average =  
97th percentile 30 day average =  
# < Q.L. = 1  
Model used =

The data are:

<0.1 - All the data are below the QL; therefore, no Limit is required  
for this material.

6/1/2011 10:24:57 AM

Facility = Town of Warrenton Water Treatment Plant  
Chemical = Manganese  
Chronic averaging period = 4  
WLAa = 50  
WLAc =  
Q.L. = .2  
# samples/mo. = 1  
# samples/wk. = 1

Summary of Statistics:

# observations = 1  
Expected Value = 5130  
Variance = 9474083  
C.V. = 0.6  
97th percentile daily values = 12483.4  
97th percentile 4 day average = 8535.24  
97th percentile 30 day average = 6187.05  
# < Q.L. = 0  
Model used = BPJ Assumptions, type 2 data

A limit is needed based on Acute Toxicity  
Maximum Daily Limit = 50  
Average Weekly limit = 50  
Average Monthly Limit = 50

The data are:

5130

Units of measurement are ug/L.

Public Notice – Environmental Permit

**PURPOSE OF NOTICE:** To seek public comment on a draft permit from the Department of Environmental Quality that will allow the release of treated industrial wastewater into a water body in Fauquier County, Virginia.

**PUBLIC COMMENT PERIOD:** XXX, 2011 to 5:00 p.m. on XXX, 2011

**PERMIT NAME:** Virginia Pollutant Discharge Elimination System Permit - Wastewater issued by DEQ, under the authority of the State Water Control Board

**APPLICANT NAME, ADDRESS AND PERMIT NUMBER:** Town of Warrenton, P. O. Drawer 341, Warrenton, VA 20188, VA0058793

**NAME AND ADDRESS OF FACILITY:** Town of Warrenton Water Treatment Plant, 7240 Blackwell Road, Warrenton, VA 20186

**PROJECT DESCRIPTION:** Town of Warrenton has applied for a reissuance of a permit for the public Town of Warrenton Water Treatment Plant. The applicant proposes to release a type of treated industrial wastewaters at a rate of 0.25 million gallons per day into a water body. The sludge will be disposed of at the Town of Warrenton Wastewater Treatment Plant (VA0021172). The facility proposes to release the treated industrial wastewaters in the Warrenton Reservoir, UT in Fauquier County in the Potomac River watershed. A watershed is the land area drained by a river and its incoming streams. The permit will limit the following pollutants to amounts that protect water quality: pH, Chlorine, Total Recoverable Manganese, and Total Suspended Solids.

**HOW TO COMMENT AND/OR REQUEST A PUBLIC HEARING:** DEQ accepts comments and requests for public hearing by e-mail, fax or postal mail. All comments and requests must be in writing and be received by DEQ during the comment period. Submittals must include the names, mailing addresses and telephone numbers of the commenter/requester and of all persons represented by the commenter/requester. A request for public hearing must also include: 1) The reason why a public hearing is requested. 2) A brief, informal statement regarding the nature and extent of the interest of the requester or of those represented by the requestor, including how and to what extent such interest would be directly and adversely affected by the permit. 3) Specific references, where possible, to terms and conditions of the permit with suggested revisions. A public hearing may be held, including another comment period, if public response is significant, based on individual requests for a public hearing, and there are substantial, disputed issues relevant to the permit.

**CONTACT FOR PUBLIC COMMENTS, DOCUMENT REQUESTS AND ADDITIONAL INFORMATION:** The public may review the documents at the DEQ-Northern Regional Office by appointment, or may request electronic copies of the draft permit and fact sheet.

Name: Joan C. Crowther

Address: DEQ-Northern Regional Office, 13901 Crown Court, Woodbridge, VA 22193

Phone: (703) 583-3925 E-mail: joan.crowther@deq.virginia.gov Fax: (703) 583-3821

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**APPLICANT NAME, ADDRESS AND PERMIT NUMBER:** Town of Warrenton, P. O. Drawer 341, Warrenton, VA 20188, VA0058793

**NAME AND ADDRESS OF FACILITY:** Town of Warrenton Water Treatment Plant, 7240 Blackwell Road, Warrenton, VA 20186

**PROJECT DESCRIPTION:** Town of Warrenton has applied for a reissuance of a permit for the public Town of Warrenton Water Treatment Plant. The applicant proposes to release a type of treated industrial wastewaters at a rate of 0.25 million gallons per day into a water body. The sludge will be disposed of at the Town of Warrenton Wastewater Treatment Plant (VA0021172). The facility proposes to release the treated industrial wastewaters in the Warrenton Reservoir, UT in Fauquier County in the Potomac River watershed. A watershed is the land area drained by a river and its incoming streams. The permit will limit the following pollutants to amounts that protect water quality: pH, Chlorine, and Total Suspended Solids. The proposed Total Recoverable Manganese effluent limitations that were in the previous public notice dated June 22, 2011 and closed July 22, 2011 will be removed. The discharge will be monitored for Total Recoverable Manganese.

**HOW TO COMMENT AND/OR REQUEST A PUBLIC HEARING:** DEQ accepts comments and requests for public hearing by e-mail, fax or postal mail. All comments and requests must be in writing and be received by DEQ during the comment period. Submittals must include the names, mailing addresses and telephone numbers of the commenter/requester and of all persons represented by the commenter/requester. A request for public hearing must also include: 1) The reason why a public hearing is requested. 2) A brief, informal statement regarding the nature and extent of the interest of the requester or of those represented by the requestor, including how and to what extent such interest would be directly and adversely affected by the permit. 3) Specific references, where possible, to terms and conditions of the permit with suggested revisions. A public hearing may be held, including another comment period, if public response is significant, based on individual requests for a public hearing, and there are substantial, disputed issues relevant to the permit.

**CONTACT FOR PUBLIC COMMENTS, DOCUMENT REQUESTS AND ADDITIONAL INFORMATION:** The public may review the documents at the DEQ-Northern Regional Office by appointment, or may request electronic copies of the draft permit and fact sheet.

Name: Joan C. Crowther

Address: DEQ-Northern Regional Office, 13901 Crown Court, Woodbridge, VA 22193

Phone: (703) 583-3925 E-mail: joan.crowther@deq.virginia.gov Fax: (703) 583-3821

**State "Transmittal Checklist" to Assist in Targeting  
Municipal and Industrial Individual NPDES Draft Permits for Review**

**Part I. State Draft Permit Submission Checklist**

In accordance with the MOA established between the Commonwealth of Virginia and the United States Environmental Protection Agency, Region III, the Commonwealth submits the following draft National Pollutant Discharge Elimination System (NPDES) permit for Agency review and concurrence.

Facility Name:	Town of Warrenton Water Treatment Plant
NPDES Permit Number:	VA0058793
Permit Writer Name:	Joan C. Crowther
Date:	5/10/11

Major ☐Minor ☒Industrial ☒Municipal ☐**I.A. Draft Permit Package Submittal Includes:**

	Yes	No	N/A
1. Permit Application?	X		
2. Complete Draft Permit (for renewal or first time permit – entire permit, including boilerplate information)?	X		
3. Copy of Public Notice?	X		
4. Complete Fact Sheet?	X		
5. A Priority Pollutant Screening to determine parameters of concern?	X		
6. A Reasonable Potential analysis showing calculated WQBELs?	X		
7. Dissolved Oxygen calculations?			X
8. Whole Effluent Toxicity Test summary and analysis?		X	
9. Permit Rating Sheet for new or modified industrial facilities?	X		

**I.B. Permit/Facility Characteristics**

	Yes	No	N/A
1. Is this a new, or currently unpermitted facility?		X	
2. Are all permissible outfalls (including combined sewer overflow points, non-process water and storm water) from the facility properly identified and authorized in the permit?	X		
3. Does the fact sheet or permit contain a description of the wastewater treatment process?	X		
4. Does the review of PCS/DMR data for at least the last 3 years indicate significant non-compliance with the existing permit?		X	
5. Has there been any change in streamflow characteristics since the last permit was developed?		X	
6. Does the permit allow the discharge of new or increased loadings of any pollutants?	X		
7. Does the fact sheet or permit provide a description of the receiving water body(s) to which the facility discharges, including information on low/critical flow conditions and designated/existing uses?	X		
8. Does the facility discharge to a 303(d) listed water?		X	
a. Has a TMDL been developed and approved by EPA for the impaired water?			X
b. Does the record indicate that the TMDL development is on the State priority list and will most likely be developed within the life of the permit?			X
c. Does the facility discharge a pollutant of concern identified in the TMDL or 303(d) listed water?			X
9. Have any limits been removed, or are any limits less stringent, than those in the current permit?		X	
10. Does the permit authorize discharges of storm water?		X	



<b>I.B. Permit/Facility Characteristics – cont.</b>	<b>Yes</b>	<b>No</b>	<b>N/A</b>
11. Has the facility substantially enlarged or altered its operation or substantially increased its flow or production?		X	
12. Are there any production-based, technology-based effluent limits in the permit?		X	
13. Do any water quality-based effluent limit calculations differ from the State's standard policies or procedures?		X	
14. Are any WQBELs based on an interpretation of narrative criteria?		X	
15. Does the permit incorporate any variances or other exceptions to the State's standards or regulations?		X	
16. Does the permit contain a compliance schedule for any limit or condition?		X	
17. Is there a potential impact to endangered/threatened species or their habitat by the facility's discharge(s)?		X	
18. Have impacts from the discharge(s) at downstream potable water supplies been evaluated?	X		
19. Is there any indication that there is significant public interest in the permit action proposed for this facility?		X	
20. Have previous permit, application, and fact sheet been examined?	X		

## Part II. NPDES Draft Permit Checklist

### Region III NPDES Permit Quality Review Checklist – For Non-Municipals (To be completed and included in the record for all non-POTWs)

II.A. Permit Cover Page/Administration	Yes	No	N/A
1. Does the fact sheet or permit describe the physical location of the facility, including latitude and longitude (not necessarily on permit cover page)?	X		
2. Does the permit contain specific authorization-to-discharge information (from where to where, by whom)?	X		

II.B. Effluent Limits – General Elements	Yes	No	N/A
1. Does the fact sheet describe the basis of final limits in the permit (e.g., that a comparison of technology and water quality-based limits was performed, and the most stringent limit selected)?	X		
2. Does the fact sheet discuss whether “antibacksliding” provisions were met for any limits that are less stringent than those in the previous NPDES permit?	X		

II.C. Technology-Based Effluent Limits (Effluent Guidelines & BPJ)	Yes	No	N/A
1. Is the facility subject to a national effluent limitations guideline (ELG)?		X	
a. If yes, does the record adequately document the categorization process, including an evaluation of whether the facility is a new source or an existing source?			X
b. If no, does the record indicate that a technology-based analysis based on Best Professional Judgement (BPJ) was used for all pollutants of concern discharged at treatable concentrations?	X		
2. For all limits developed based on BPJ, does the record indicate that the limits are consistent with the criteria established at 40 CFR 125.3(d)?	X		
3. Does the fact sheet adequately document the calculations used to develop both ELG and /or BPJ technology-based effluent limits?	X		
4. For all limits that are based on production or flow, does the record indicate that the calculations are based on a “reasonable measure of ACTUAL production” for the facility (not design)?			X
5. Does the permit contain “tiered” limits that reflect projected increases in production or flow?		X	
a. If yes, does the permit require the facility to notify the permitting authority when alternate levels of production or flow are attained?			X
6. Are technology-based permit limits expressed in appropriate units of measure (e.g., concentration, mass, SU)?	X		
7. Are all technology-based limits expressed in terms of both maximum daily, weekly average, and/or monthly average limits?	X		
8. Are any final limits less stringent than required by applicable effluent limitations guidelines or BPJ?		X	

II.D. Water Quality-Based Effluent Limits	Yes	No	N/A
1. Does the permit include appropriate limitations consistent with 40 CFR 122.44(d) covering State narrative and numeric criteria for water quality?	X		
2. Does the record indicate that any WQBELs were derived from a completed and EPA approved TMDL?			X
3. Does the fact sheet provide effluent characteristics for each outfall?	X		
4. Does the fact sheet document that a “reasonable potential” evaluation was performed?	X		
a. If yes, does the fact sheet indicate that the “reasonable potential” evaluation was performed in accordance with the State’s approved procedures?	X		
b. Does the fact sheet describe the basis for allowing or disallowing in-stream dilution or a mixing zone?			X

<b>II.D. Water Quality-Based Effluent Limits – cont.</b>	<b>Yes</b>	<b>No</b>	<b>N/A</b>
c. Does the fact sheet present WLA calculation procedures for all pollutants that were found to have “reasonable potential”?	X		
d. Does the fact sheet indicate that the “reasonable potential” and WLA calculations accounted for contributions from upstream sources (i.e., do calculations include ambient/background concentrations where data are available)?			X
e. Does the permit contain numeric effluent limits for all pollutants for which “reasonable potential” was determined?			X
5. Are all final WQBELs in the permit consistent with the justification and/or documentation provided in the fact sheet?			X
6. For all final WQBELs, are BOTH long-term (e.g., average monthly) AND short-term (e.g., maximum daily, weekly average, instantaneous) effluent limits established?			X
7. Are WQBELs expressed in the permit using appropriate units of measure (e.g., mass, concentration)?			X
8. Does the fact sheet indicate that an “antidegradation” review was performed in accordance with the State’s approved antidegradation policy?	X		

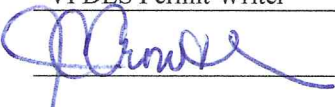
<b>II.E. Monitoring and Reporting Requirements</b>	<b>Yes</b>	<b>No</b>	<b>N/A</b>
1. Does the permit require at least annual monitoring for all limited parameters?	X		
a. If no, does the fact sheet indicate that the facility applied for and was granted a monitoring waiver, AND, does the permit specifically incorporate this waiver?			
2. Does the permit identify the physical location where monitoring is to be performed for each outfall?	X		
3. Does the permit require testing for Whole Effluent Toxicity in accordance with the State’s standard practices?	X		

<b>II.F. Special Conditions</b>	<b>Yes</b>	<b>No</b>	<b>N/A</b>
1. Does the permit require development and implementation of a Best Management Practices (BMP) plan or site-specific BMPs?	X		
a. If yes, does the permit adequately incorporate and require compliance with the BMPs?	X		
2. If the permit contains compliance schedule(s), are they consistent with statutory and regulatory deadlines and requirements?		X	
3. Are other special conditions (e.g., ambient sampling, mixing studies, TIE/TRE, BMPs, special studies) consistent with CWA and NPDES regulations?			X

II.G. Standard Conditions			Yes	No	N/A
1. Does the permit contain all 40 CFR 122.41 standard conditions or the State equivalent (or more stringent) conditions?			X		
List of Standard Conditions – 40 CFR 122.41					
Duty to comply	Property rights	Reporting Requirements			
Duty to reapply	Duty to provide information	Planned change			
Need to halt or reduce activity	Inspections and entry	Anticipated noncompliance			
not a defense	Monitoring and records	Transfers			
Duty to mitigate	Signatory requirement	Monitoring reports			
Proper O & M	Bypass	Compliance schedules			
Permit actions	Upset	24-Hour reporting			
		Other non-compliance			
2. Does the permit contain the additional standard condition (or the State equivalent or more stringent conditions) for existing non-municipal dischargers regarding pollutant notification levels [40 CFR 122.42(a)]?			X		

### Part III. Signature Page

Based on a review of the data and other information submitted by the permit applicant, and the draft permit and other administrative records generated by the Department/Division and/or made available to the Department/Division, the information provided on this checklist is accurate and complete, to the best of my knowledge.

Name	<u>Joan C. Crowther</u>
Title	<u>VPDES Permit Writer</u>
Signature	 <u></u>
Date	<u>May 10, 2011</u>